PEND OREILLE COUNTY

O. K. (2)

(see under silver)

Pend Oreille Mines & Metals Co. (1)

(see under zinc)

STEVENS COUNTY

Advance (2) (see under zinc) Black Rock (3) (see under zinc)

Farmer (4)

(see under zinc)

Lucile (1) (see under zinc)

New England (5) (see under zinc)

Old Dominion (6) (see under silver)

GERMANIUM

Properties—Germanium is a rare metal allied to tin. It is grayish white, lustrous, crystalline, light in weight, hard, and brittle. It is a semiconductor of electricity, a property which is utilized in the manufacture of electronic devices. Germanium expands upon solidification. It amalgamates with mercury and is known to form alloys with aluminum, copper, silver, magnesium, and some other metals. It is resistant to corrosion and is stable in air at temperatures up to 600° C. It has valences of 2 and 4 and forms two corresponding series of compounds. Other properties are shown in the table on page 12.

Uses—Germanium had very few uses for many years, having only minor use in medicine and as magnesium germanate for a phosphor in fluorescent lights. It has been used as a catalyst in the hydrogenation of coal, and as a substitute for silica in making a highly refractive optical glass. It has been used also in making a new type of photoelectric cell. In 1950 the principal use was in the metallic form in diode rectifiers for high-frequency electrical currents in radar and television circuits. Probably the greatest potential use for germanium, and certainly the use in which the greatest interest was being shown in 1952, is in transistors, the three-element electronic devices which act like triode radio tubes for amplifiers. The transistors have advantages over radio tubes in being much smaller, lighter in weight, and longer lived, and in requiring no filament current.

Production—Commercial production of germanium began in this country about in 1941. In 1950 the principal production was as a byproduct of zinc refining at Joplin, Missouri, but small production was coming from at least two other plants in Pennsylvania and New York. Production was at the rate of 1,000 pounds per year in 1948 but had increased to 6,000 pounds in 1951 and was expanding rapidly. Germanium is recovered from flue dusts in England. Zinc concentrates from the Metaline district in Washington are germaniferous, hence have been shipped to Mississippi Valley smelters, where the germanium is recoverable in horizontal-retort smelters.

Prices—Germanium metal was quoted in 1936 at \$5.50 per gram, and in 1940 at \$4,500 per pound, but by 1946 it had dropped to \$180 per pound. The price then rose until it reached \$340 per pound in 1952. In June 1955 the price was \$295 per pound.

Ore minerals—Germanium occurs in amounts up to 10 percent in germanite, Cu₃(Ge,Ga,Fe,Zn)(As,S)₄. Renierite, similar to germanite except that it contains tin, carries from 6 to 8 percent germanium. Argyrodite, 4Ag₂S•GeS., contains about 7 percent germanium but is very rare, as are all germanium minerals.

Geology-Germanium is widely distributed in nature as a very minor constituent in many common minerals, but rarely is it naturally concentrated enough to be recoverable. It is found in some coals to the extent of about 0.001 percent, and flue dusts from the burning of such coals contain up to 9 percent germanium. The metal is found in some zinc ores, and in the Tri-State district it occurs in amounts from 0.01 to 0.1 percent. It is found in like amounts in some ores of silver, tin, copper, and iron.

OCCURRENCES

The map showing the numbered germanium occurrences is plate 3, on page 11 in volume 2.

PEND OREILLE COUNTY

Pend Oreille Mines & Metals Co. (1) (see under zinc)

STEVENS COUNTY

Advance (1) (see under zinc)

Black Rock (2) (see under zinc)

Farmer (3) (see under zinc)

New England (4) (see under zinc)

GOLD

Properties—Gold is bright yellow when pure, but the color intensity varies to lighter or darker with the amount of silver or copper present. Gold powder produced by precipitation or volatilization is violet, purple, or ruby

colored. Gold is very heavy and soft and is the most ductile and malleable of metals. It is a good conductor of heat and electricity, its electrical conductivity being exceeded only by silver and copper. The element is not

attacked by air or oxygen and is extremely inactive. It is insoluble in all acids except aqua regia and selenic acid. It is bivalent and tetravalent but combines with only a few other elements to form compounds. Other properties are shown in the table on page 12.

Uses—Gold has little use other than monetary and decorative. Since earliest historical time gold has been used for currency or as a monetary standard, and at the present time these are the principal uses of the metal. In the arts it is used in the manufacture of jewelry, watches, and gold foil for lettering and decorative purposes. Lesser amounts are used in dental work and in the electrical and chemical industries, and small quantities are used in medicine and photography. Most of the industrial uses stem largely from its resistance to corrosion and its excellent ductility and malleability, but because of its extreme softness as the pure metal, it is often alloyed with silver or copper.

Production—Gold production forms an important part of the total mineral output of the state of Washington. Every year prior to 1916 gold outranked in value all other metals produced, and it has ranked first in many of the years since that date, but in 1952 gold accounted for only 13 percent of the value of metallic production in the state. In general, gold mining has fared relatively well during economic recessions and has been at a disadvantage during periods of general prosperity and high prices. Although placer gold was reported along the Yakima River as early as 1853, and small production was reported from near Colville as early as 1855, the first notable production dates from 1859, and this was from the Similkameen River, in what is now Okanogan County. Lode gold mining began in this area, near the base of Mount Chopaka, in about 1871. The Blewett district was an early producer of both placer and lode gold, and by the end of the nineteenth century most of the presently known gold properties in the state had been prospected. The total gold production of the state from 1860 through 1952 has been 2,570,002 ounces, valued at \$68,705,393, which ranks Washington eleventh among the states as a gold producer. The greatest production in any single year since 1900 was 92,117 ounces, valued at \$3,224,095, in 1950. In that year 97 percent of the Washington gold production came from three mines: the Holden, Gold King, and Knob Hill, which ranked in production twelfth, fourteenth, and eighteenth, respectively, among the gold mines in the United States. Prior to 1900 most of the gold produced in the state was from placers, but since that time less than 3 percent of the production has been from placers. Twenty-seven counties have reported placer production.

Prices—The value of gold has generally increased for more than 2,000 years. The price was a little over \$20 per fine troy ounce for more than 200 years until January 1934, when the President set the United States Mint price at \$35 per ounce, at which figure it has remained. Since that date, gold which has been smelted, retorted, or cyanided may be sold only to the U. S. Mint, either directly or through a licensed gold buyer. However, gold in its "natural state"—native gold and unretorted amalgam—may be legally sold on the domestic market. In the past few years gold has been quoted at from \$35 to more than \$50 per ounce on the free market in various countries.

Ore minerals—Gold occurs most commonly as the native metal, which usually is alloyed with varying amounts of silver, generally 10 to 20 percent. Native gold may occur as irregular masses, ranging in size from nuggets weighing several ounces, or even pounds, down to submicroscopic particles. Also, and more rarely, it occurs as well-formed crystals, as in some of the lode deposits in the Swauk district in Kittitas County. Less commonly, gold occurs as one of the tellurides: calaverite, AuTe₂; sylvanite, (Au,Ag)Te₂; or petzite, (Au,Ag)₂Te, containing 43.5, 35.1, and 53.4 percent gold, respectively. Other gold minerals are very rare. In most ores the gold is so finely disseminated as to be invisible to the naked eye.

Geology—Gold occurs in minute quantities in almost all rocks, and sea water has been variously reported to contain from 0.2 to 65 milligrams of gold per metric ton. It occurs in recoverable quantities in most ores of silver, copper, bismuth, and antimony and in many ores of lead and zinc, as well as in many deposits where gold is the only value. It occurs in deposits of various origins but most commonly in quartz veins and usually closely associated with granitic or volcanic rocks of acidic or intermediate composition. Pyrite is the most common associated metallic mineral, and quartz is the most common gangue mineral, but carbonates, fluorspar, tourmaline, barite, and other nonmetallic minerals are not uncommon as gangue. The high specific gravity and resistance to weathering of gold account for the fact that it concentrates in placer deposits, where it commonly is found associated with magnetite, ilmenite, chromite, monazite, rutile, zircon, garnet, and other heavy minerals. Both stream and beach placers are found in Washington.

OCCURRENCES

The maps showing the numbered lode gold occurrences are plates 8 and 9, on pages 25 and 27 in volume 2.

The numbered placer gold occurrences are shown on plate 10, on page 29, also in volume 2.

GOLD, LODE

BENTON COUNTY

Prosser (1)

Loc: SW¼ sec. 33, (9-25E), about 3 mi. E. of Prosser on S. side of the highway. Access: Highway. Owner: R. W. Wilson, Grandview, Wash. (1934). Ore: Gold, silver. Ore min: Pyrite. Deposit: Mineralized zone along contact of basalt with interbasalt sediments. Dev: Shaft 50 ft. deep and open cut 100 ft. long. Assays: 26¢ to \$1.60 Au and about the same values

in Ag. One assay showed \$13.00 Au. (1934). **Ref: 104,** 6/30/36, p. 24. **158.**

CHELAN COUNTY

Allen Magnesium (60)

Loc: On headwaters of Roaring (Raging) Cr., about 10 mi. W. of mouth of Chikamin Cr. Elev: 3,400 to 4,200 ft. Access: Trail. Prop: 6 claims. Owner: C. F. Allen, Peshastin, Wash.

(1934). Ore: Gold, silver. Deposit: Quartz-cemented breccia in talc and soapstone. Dev: 2 adits. Assays: Tr. to 0.44 oz. Au, 0.20 to 0.26 oz. Ag. Ref: 158.

Alta Vista (Pole Pick No. 2) (83)

Loc: SW¼ sec. 2, (22-17E), on S. side of Culver Gulch. Elev: 3,700 ft. Access: Road and trail. Prop: 1 claim: Pole Pick No. 2. Owner: Alta Vista Mining Co. (1911). Ore: Gold. Ore min: Arsenopyrite, pyrite. Gangue: Quartz, calcite, talc. Deposit: 4-ft. quartz-calcite vein in peridotite. The vein is heavily impregnated with ore minerals. Dev: Total of about 1,190 ft. of crosscuts and drifts. Assays: Ranged from 0.04 to 1.6 oz. Au. Main vein ranged from \$8 to \$200 Au. Prod: Amount not known. Ref: 63, p. 73. 161, pp. 89-91.

Amigo (123)

Loc: Sec. 9, (22-17E), across Bear Cr. from the Union and Dominion property, Nigger Cr. area. Prop. 1 claim. Ore: Gold, silver. Ore min: Sulfides. Deposit: 5-ft. ledge. Assays: \$2.75 to \$5.40 Au, Ag. Ref: 63, p. 75. 67, p. 14.

Apex

Loc: Blewett dist. Ore: Gold. Prod: Small amounts 1939 and 1940. Ref: 67, p. 9. 97, 1940, p. 476; 1941, p. 472.

Apple Queen (84)

Loc: Sec. 1, (22-17E), Blewett dist. Owner: Thad Neubauer, Blewett, Wash. (1943). Ore: Gold. Ref: 67, p. 14. 158.

April Fool (85)

Loc: Sec. 1, (22-17E), Blewett dist. Ore: Gold, silver. Ref: 67, p. 14.

Arizona (32)

(see under copper)

Belcher (13)

(see under lead)

Big Chief

(see under lead)

Big Elephant

Loc: On Fall Cr., a tributary to Chiwawa R. Prop. 6 claims. Owner: A. W. Purdy (1897). Ore: Gold, silver, copper. Dev: Open cut. Assays: \$3 to \$9 Au, \$4.75 Ag. Ref: 63, p. 79. 67, p. 22.

Black Jack (Blewett, La Rica) (87)

(see also Gold Bond)

Loc: SW1/4 sec. 1, (22-17E), near Peshastin Cr., Blewett dist. Elev: 2,340 ft. Prop: 1 claim: Black Jack. Owner: Gold Bond Mining Co. (1951——). La Rica Consolidated Mining Co. (1906). Washington Meteor Mining Co. (1908-1911). Blewett Mine Leasing Co. (1910). Ore: Gold, mercury. Ore min: Free gold, native mercury, arsenopyrite, pyrite. Deposit: Quartz vein cutting serpentine. Dev: 1,300-ft. adit, a shorter adit, several winzes and raises. Assays: 3,000 tons of ore av. \$10 Au. Prod: 3,000 tons of ore about 1900, \$4,000 in 1940. Ref: 63, p. 73. 67, p. 10. 88, p. 60. 97, 1906, p. 366. 129, p. 275. 161, pp. 84-89.

Black Warrior (1)

(see under copper)

Black and White (Diamond Dick) (86)

Loc: SW¹/₄ sec. 12, (22-17E), on E. side of Peshastin Cr. several hundred yards S. of Blewett. Access: 50 ft. above highway U. S. 97. Prop: 2 claims (1953). Owner: Wm. Johnson, Wenatchee, Wash. (1953——). H. Whitely and John White (1938). Ore: Gold, silver. Ore min: Free gold, pyrite, chalcopyrite, arsenopyrite. Gangue: Quartz, calcite. Deposit: Small

ore-bearing stringers of quartz and calcite in a shear zone in serpentine. **Dev:** A shaft and 3 adits with raises and stopes, totaling at least 850 ft. of workings. **Improv:** 40-ton mill in good condition (1942). **Assays:** Reported \$8 Au, 80¢ Ag. **Prod:** Small amounts in 1934 and 1939. **Ref:** 67, p. 9. 97, 1935, p. 352; 1940, p. 476. 158.

Blewett (88)

(see also Black Jack, Peshastin, Gold Bond)

Loc: SE¼ sec. 2, (22-17E), Blewett dist. Owner: Gold Bond Mining Co., Spokane, Wash. (1952——). Amalgamated Gold Mines Co. (1918-1926). United States Mines & Metals Corp. (1932). Washington Gold Mines Corp. (1932). Ore: Gold. Prod: Amount of early shipments not known. Shipped 1939-1940. Ref: 97, 1910, p. 603; 1931, p. 476; 1940, p. 476; 1941, p. 472. 98, 1920-1926. 104, 6/15/32, p. 27. 106, 5/19/32; 8/18/32, p. 6.

Blind Lead

Loc: On a fork of Jack Cr., a tributary of Icicle Cr., Leavenworth dist. Prop: 3 claims. Owner: John Bjork, A. Van Epps, H. L. Farley, and Camille Massey (1897). Ore: Gold. Ore min: Arsenopyrite. Assays: \$13.80 Au. Ref: 63, p. 66. 67, p. 28.

Blinn (124)

(see also Gold Bond)

Loc: NE¼ sec. 3, (22-17E). Claims extend from the head of Culver Gulch westward to and across Nigger Cr. Access: Road up Nigger Cr. Prop: 5 patented claims: Shafer, Olympia, Pole Pick No. 3, Seattle, Vancouver. Owner: Gold Bond Mining Co. (1936——). Cascade Mining Co. (1911). Bonanza Gold Mine Co. (1934). Ore: Gold. Ore min: Pyrite, chalcopyrite. Gangue: Quartz, calcite. Deposit: A 1- to 5-ft. quartz-calcite vein cuts serpentine and greenstone. Dev: 1 long adit and 1,000 ft. of shorter ones. Prod: In 1880 ore was milled in a 2-stamp Harrington mill. Produced 1936, 1937. Ref: 67, p. 10. 104, 11/15/36, p. 27; 1/15/37, p. 28. 113, 7/1/37, p. 16. 158. 161, pp. 92-93.

Blue Bell (I. X. L.) (89)

Loc: SW 1/4 sec. 1, (22-17E), on E. side of Peshastin Cr. 1/4 mi. N. of Blewett. Access: Road. Owner: Thad Neubauer, Blewett, Wash. (1934). Ore: Gold. Ore min: Pyrite, free gold. Gangue: Quartz, calcite. Deposit: No well-defined veins. Seams in serpentine are filled with vein and ore minerals. Dev: 450 ft. of adits. Prod: Some small pockets yielded high values. Ref: 63, p. 74. 67, p. 10. 158. 161, p. 99.

Blue Jay (33)

(see under copper)

Blue Jay Extension (34)

(see under copper)

Bobtail (Wye) (90)

Loc: SW 1/4 sec. 2, (22-17E), in Culver Gulch, Blewett dist. Elev: 3,100 ft. Access: Road and trail. Prop: 1 claim. Owner: Washington Meteor Mining Co. (1908-1911). Blewett Mine Leasing Co. (1910). Ore: Gold. Deposit: Lenticular quartz vein in serpentine. Small ore body of medium grade. Dev: Two short adits, one 50 ft. long. Prod: Has produced. Ref: 67, p. 14. 129, p. 272. 143, pp. 78-79. 144, p. 4. 161, pp. 84-89.

Bonanza and Deadwood (79)

Loc: Near head of Falls Cr., a tributary to Ingalls Cr. Ore: Gold, nickel. Ref: 63, p. 77.

Bryan (52)

(see under copper)

Budge (136)

Loc: SW1/4 sec. 13, (22-17E), on S. bank of Shaser Cr. near its mouth. Access: A short distance W. of highway U. S. 97. Prop: 4 claims. Owner: Murray Budge and C. C. Golding, Leavenworth, Wash. (1942). Ore: Gold, silver. Dev: More than 200 ft. of adit. Assays: \$3.50 to \$12 Au, Ag. Ref: 67, p. 15.

Buster (26)

Loc: Sec. 36, (32-18E), near head of Fish Cr. Prop: 3 claims. Owner: H. H. Hunt and Ole Olsen (1897). Ore: Gold, silver. Ore min: Pyrite, native silver. Ref: 63, p. 81. 67, p. 31.

Butte (65)

Loc: Secs. 25 and 26, (27-22E), Chelan Butte dist. Owner: Chelan Butte Gold Mining Co. (1909-1915). Ore: Gold. Prod: Amount not known. Ref: 67, p. 20. 105, 1898, p. 311; 1907, pp. 584, 807. 114, no. 5, 1909, p. 84. 116, no. 10, 1907, p. 18.

Butte

(see under copper)

Byron (91)

Loc: Sec. 2, (22-17E), Blewett dist. Owner: Blewett Pass Mining Co. (1934). Ore: Gold. Ref: 67, p. 15. 158.

Caledonia (92)

Loc: Sec. 1, (22-17E), Blewett dist. Prop. 4 claims. Ore: Gold, silver, copper. Ore min: Pyrite, free gold, tetrahedrite. Gangue: Quartz. Deposit: 3 parallel veins. Dev: 2 shafts and 2 adits. Assays: Some assays ran more than \$100 per ton. Ref: 63, p. 74. 67, p. 15.

Canada (35)

(see under copper)

Cascade (36)

Loc: SW1/4 sec. 12, (31-18E), on both sides of Cascade Cr. Access: Trail from mouth of creek at Lk. Chelan. Prop: 3 claims. Owner: J. R. Moore (1897). Ore: Gold, lead. Ore min: Galena and other sulfides. Deposit: Paystreak 2 ft. wide. Dev: Two 10-ft. adits. Ref: 63, p. 81. 67, p. 31.

Cascade Consolidated (2)

(see under silver)

Champion (58)

Loc: Sec. 10, (29-16E), near mouth of Maple Cr., Chiwawa dist. Prop: 5 claims. Owner: Charles Allen (1897). Ore: Gold. Ore min: Pyrite. Dev: 2 tunnels, each 300 ft. long. Assays: \$4 to \$7 Au. Ref: 63, p. 79. 67, p. 22.

Charlotte (138)

Loc: Sec. 22, (22-20E), adjoining the Golden King property on the S., Wenatchee dist. Prop: 1 claim. Owner: D. P. Bigelow, Thomas Groves, and F. M. Scheble (1897). Ore: Gold, silver. Gangue: Quartz. Deposit: Described as a wide porphyritic dike veined with quartz, but probably silicified sandstone such as that in the Golden King. Assays: \$6 to \$8 Au, Ag. Ref: 63, p. 71. 67, p. 46.

Chub (37)

(see under silver)

Cinnabar King

Loc: On Nigger Cr. Ore: Gold, nickel, mercury. Assays: \$3.50 Au. Ref: 63, p. 76.

Clagstone (3)

(see under lead)

Cook (66)

Loc: Sec. 25, (27-22E). Ore: Gold. Prod: Bullion was shipped in 1909 (?) and 1919. Ref: 67, p. 20. 97, 1919, p. 492.

Cook-Galbraith (73)

Loc: T. 25 N., R. 20 E, about 3 mi. up Entiat R. from its mouth. Near top of ridge N. of Entiat R . Elev: 2,160 ft. Access: Road. Prop: 80 acres deeded land. Ore: Gold. Ore min: Free gold. Gangue: Quartz. Deposit: A 7- to 18-in. quartz vein in granodiorite. Dev: Open cuts. Assays: 2 assays gave values of \$23.80 and \$68.60 per ton (1935). Ref: 67, p. 25. 158.

Copper King (Pickwick)

(see Pickwick under copper)

Copper King (Robischaud)

(see Robischaud under molybdenum)

Crown Prince and Free Coinage

(see under copper)

Culver (93)

Loc: SW¼ sec. 2, (22-17E), Blewett dist. Elev: 3,250 to 4,100 ft. Access: Road and trail. Prop: 1 claim. Owner: Washington Meteor Mining Co. (1911). Culver Gold Mining Co. (1891). Blewett Gold Mining Co. (1892-1894). Blewett Mining & Milling Co. (1895). Warrior General Co. (1896). Chelan Mining & Milling Co. (1902). Washington Meteor Mining Co. (1908-1909). Blewett Mining & Leasing Co. (1910). Ore: Gold, silver. Ore min: Free gold, arsenopyrite, pyrite. Gangue: Quartz, calcite, talc. Deposit: Ore occurs as lenses in a quartz-calcite vein enclosed in serpentine. Dev: 14 adits aggregating more than 4,500 ft. of length, and numerous raises and stopes. Assays: \$5 to \$500 Au. Prod: About \$300,000 by 1902. Since then production has been listed with that for Washington Meteor Mining Co. Ref: 12, pp. 11-12. 63, p. 72. 67, p. 10. 88, p. 58. 143, pp. 78-79. 144, p. 9. 161, pp. 84-89.

Daisy Dean (125)

Loc: NE¼ sec. 3, (22-17E), on Nigger Cr., upstream from Eagle and Iowa prospect. Access: Road. Prop. 1 claim. Ore: Gold, silver, lead. Deposit: 2 veins cut serpentine and diorite. Dev: 2 short adits. Assays: \$32.30 Au, \$8 Ag, 60% Pb. Ref: 63, p. 75. 67, p. 15.

Davenport (4)

(see under copper)

Deadwood

(see Bonanza and Deadwood)

Diamond Dick

(see Black and White)

Dominion

(see Union and Dominion)

Donahue

(May be same as North Star)

Loc: Peshastin dist. Owner: Mr. O'Donahue (1890). Ore: Gold. Ore min: Free gold. Improv: Ore treated by arrastre in 1890. Prod: \$17,000 reportedly produced in 1890. Ref: 12, p. 92.

Donaldson (94)

Loc: Sec. 1, (22-17E), Blewett dist. Ore: Gold, silver. Ref: 67, p. 15.

Doubtful (5)

(see under lead)

Drummer Boy (57)

Loc: Sec. 9, (29-16E), on Maple Cr., Chiwawa dist. Prop: 2 claims. Owner: Philip Hatch (1897). Ore: Gold, silver. Assays: \$5.80 Au, Ag. Ref: 63, p. 79. 67, p. 23.

Eagle and Iowa (126)

Loc: NE¼ sec. 3, (22-17E), on N. side of Nigger Cr. Access: Road. Prop: 2 claims. Owner: Henry Blinn, Leavenworth.

Wash. (1897). Ore: Gold, copper. Ore min: Pyrite, chalcopyrite. Deposit: Quartz vein 3½ ft. wide. Dev: A shaft. Assays: \$7 Au. Ref: 63, p. 75. 67, p. 15.

Eastern Star

(see Olden)

Ellen

(see Van Epps under antimony)

Emma Lee (38)

Loc: Near Blue Jay property, Meadow Cr. dist. Ore: Gold, silver, copper. Ref: 63, p. 81.

Esmeralda

Loc: On Red Mtn., Chiwawa dist. Owner: George N. Watson (1897). Ore: Gold, copper, silver. Ore min: Arsenopyrite, copper sulfides. Ref: 63, p. 78.

Eureka (Golden Cherry, Golden Chariot) (95)

Loc: SW¼ sec. 1, (22-17E), on E. side of Peshastin Cr., 2,000 ft. S. of Blewett. Elev: 2,400 ft. Prop: 1 claim. Owner: Tip Top Mining Co. (1910). Phoenix Mining & Milling Co. (1902). Ore: Gold. Deposit: A 12- to 18-in. vein in serpentine. Dev: 970 ft. of underground work. Assays: Much of the ore assays as high as \$30 Au. Prod: Amount not known. Ref: 63, p. 73. 67, pp. 10-11. 88, p. 57. 161, p. 96.

Excelsior

(see Nevada and Excelsior)

Falls (6)

(see under lead)

Flamingo (20)

(see under copper)

Flora

(see Lake and Flora)

Fraction (96)

Loc: SW1/4 sec. 1, (22-17E), Blewett dist. Ore: Gold. Prod: Amount not known. Ref: 67, p. 11. 116, no. 4, 1908, p. 74. 143, p. 79. 144, p. 9. 158.

Francis L.

(see Golden Guinea)

Free Coinage

(see Crown Prince and Free Coinage under copper)

Galbraith

(see Cook-Galbraith)

Galena (7)

(see under lead)

Gem (97)

Loc: Sec. 11, (22-17E). Ore: Gold, silver. Deposit: 5-ft. vein. Dev: 60-ft. crosscut, 20-ft. adit. Assays: \$8 to \$16 Au, 75¢ to 54 oz. Ag (1897). Ref: 63, p. 73. 67, p. 16.

Gem (39)

(see under copper)

Georgie Smith (61)

Loc: Sec. 17, (27-18E), at head of Deep Cr., Chiwawa dist. Access: Road and trail. Prop: 9 claims. Owner: Monterey Gold Mining & Milling Co. (1897). Ore: Gold. Dev: 35-ft. crosscut. Assays: Very high values reported. Ref: 63, p. 79. 67, p. 23.

Goericke

Loc: At head of Agnes Cr., Stehekin dist. Prop. 13 claims. Owner: J. M. Scheuyeaulle, J. W. Horton, Gus Anderson, and J. E. Merritt (1897). Ore: Gold. Ore min: Pyrite. Assays: Av. \$7 Au. Ref: 63, p. 84. 67, p. 40.

Gold Bond

(see also Black Jack, Blinn, Olympia, Phipps, Pole Pick, Wilder, Blewett, La Rica)

Loc: Blewett dist. Prop: 7 patented claims: Seattle, Vancouver, Shafer Extension No. 2, Olympia, Pole Pick No. 1, Pole Pick No. 2, Davidson; 17 unpatented claims. Owner: Gold Bond Mining Co., Spokane, Wash. (1937——). Ore: Gold. Ore min: Free gold. Gangue: Quartz, calcite. Prod: 1936-1937, 1941-1942, 1946-1951. Ref: 97, 1938, p. 458. 104, 11/15/36, p. 27; 1/15/37, p. 28. 133, p. 34.

Gold King

(see Golden King)

Gold Knob (137)

Loc: Secs. 16 and 21, (22-20E), Squaw Saddle area, Wenatchee dist. Access: Road. Prop: All of sec. 16, approx. 20 acres of sec. 21. Owner: Leased from State by J. J. Keegan, Wenatchee, Wash. (1951——) and subleased by Anaconda Copper Mining Co. (1952). Ore: Gold, silver. Deposit: Goldand silver-bearing quartz stockwork in Swauk sandstone. Dev: Several diamond drill holes, approx. 800 ft. of crosscutting through silicified zones, an approx. 90-ft. winze. Assays: Up to 1952 all assays have been far below ore grade. Ref: 133, p. 34. 150, p. 32. 158.

Golden Chariot

(see Eureka)

Golden Cherry

(see Eureka)

Golden Eagle (Lucky King) (98)

Loc: SE¼ sec. 2, (22-17E), on N. side of Culver Gulch ½ mi. above its junction with Peshastin Cr. Prop: 6 claims: Golden Eagle, Golden Eagle Fraction, Lone Jack, Lucky King, Leroy, Golden Eagle millsite. Owner: Golden Eagle Mining Co. (1911-1915). Ore: Gold. Ore min: Pyrite, free gold. Gangue: Quartz, calcite, talc. Deposit: A 1- to 3-ft. vein composed of quartz, calcite, and talc is impregnated with pyrite. Dev: Upper crosscut and drift total 175 ft. There is a raise to the surface. A lower crosscut totals 650 ft. Assays: 2 assays across the vein from upper adit near the raise gave \$3.75 and \$4.10 per ton. Prod: \$2,000 reported. Ref: 67, p. 11. 88, p. 59. 97, 1910, p. 603; 1914, p. 647; 1915, p. 568. 105, 1913, p. 909. 158. 161, pp. 94-95.

Golden Guinea (Francis L.) (127)

Loc: NE¼ sec. 3, (22-17E), on N. and S. banks of Nigger Cr. about 2 mi. above its mouth. Access: Road up Nigger Cr. Prop: 8 claims: Golden Guinea, Golden Guinea No. 1 East, No. 1 South, No. 2 South, Brown, Lillian, Copper Queen. Owner: R. F. Brown and F. W. Losecamp, Leavenworth, Wash. (1911). Ore: Gold, silver. Deposit: A 10- to 50-ft. iron-stained belt in the Hawkins formation contains discontinuous stringers of rusty broken quartz in a zone about 2 ft. wide. Dev: 2 adits totaling 283 ft., 43-ft. shaft, and numerous other short adits and open cuts. Assays: Several assays ran less than \$1 Au, but higher returns are claimed to have been obtained. Ref: 67, p. 16. 161, p. 97.

Golden King (Wenatchee, Squillchuck, Gold King) (139)

Loc: Near center sec. 22, (22-20E), on W. side of Squill-chuck Cr. Elev: 1,000 ft. Access: Good road to property. Prop: 2 claims. Owner: Lovitt Mining Co., Inc., Wenafchee, Wash. (1949——). V. Carkeek (1885). Golden King Mining Co. (1894). Wenatchee Mining Co. (1910-1928). J. J. Keegan (1928-1949). American Smelting & Refining Co. (1938-1939). Knob Hill Mines, Inc. (1944-1946). Ore: Gold, silver. Ore min:

Pyrite. Gangue: Quartz, calcite, siderite. Deposit: Quartz gash veins in a 200- to 800-ft.-wide silicified zone in sandstone of the Swauk formation. Dev: A quarry, 2 main adits, and a level from a 500-ft. inclined shaft, total about 2 mi. of workings. Improv: Offices, dries, warehouses, compressor houses, machine shop, and equipment for 200-ton operation (1955). Assays: 3 years' production (1944-1946) av. \$2.39 Au, Ag. 1950 shipments av. 0.74 oz. Au, 0.66 oz. Ag. 1949-1953 shipments av. 0.506 oz. Au, 0.59 oz. Ag. Highest monthly av. shipments ran 1.27 oz. Au. Prod: 240 tons yielded \$1,600 in 1894; 170 tons 1910; 20,000 tons 1938-1939; 6,216 tons 1944-1946; 135,000 tons Aug. 1, 1949-Aug. 1, 1952. 51/2 years' production through 1954 was valued at \$4,432,884. A total of 57,689 tons of ore valued at \$836,782 in 1953 yielded 23,136 oz. Au, 32,242 oz. Ag. Ref: 23-A. 63, p. 71. 67, p. 46. 97, 1950, p. 1610; 1951, p. 1614; 1952. 101, 5/55, pp. 52-53. 105, vol. 68, 1894, p. 382; vol. 101, 1910, p 63. 158.

Golden Wedge (99)

Loc: Sec. 11, (22-17E), on N. side of Culver Springs Gulch, ¼ mi. from Blewett Pass highway. Elev: Creek level. Prop: 2 claims: Golden Wedge Nos. 1 and 2. Owner: H. A. Searles and Ernie Ruhm (1948). Ore: Gold, copper. Ore min: Pyrite, chalcopyrite. Gangue: Quartz, calcite. Deposit: Quartz stringers 3 to 4 in. wide in serpentine contain disseminated ore minerals. Dev: 40-ft. adit, 37-ft. adit. Assays: Said to assay \$11.20. Ref: 158.

Gordon (128)

Loc: Sec. 9, (22-17E), on Bear Cr. Ore: Gold, nickel, silver. Dev: 55-ft. adit. Ref: 63, pp. 75-76. 67, p. 16.

Grace (40)

(see under copper)

Grand View

(see under copper)

Gray Eagle

(see under silver)

Great Republic

(see under lead)

Hawk's Nest (62)

Loc: Sec. 17, (27-18E), at head of Deep Cr., Entiat dist. Access: Road and trail. Prop. 2 claims. Ore: Gold. Ref: 63, p. 79. 67, p. 23.

Hazel (100)

Loc: Sec. 1, (22-17E), Blewett dist. Owner: Blewett Pass Mining Co. (1934). Ore: Gold. Ref: 67, p. 16. 158.

Hidden Treasure (56A)

Loc: NW4/SW4/4 sec. 17, (30-21E), just W. of Chelan-Methow summit. Prop: 3 unpatented claims. Owner: J. H. Baker, Joe Baker, and Norman Lindsley, Chelan, Wash. (1946). Ore: Gold, silver. Gangue: Talc, chlorite. Deposit: Hydrothermally altered rock along contact of granitic rock with hornblendite. Dev: 20-ft. shaft. Assays: Surface samples assay \$5 Au, Ag. Ref: 51, p. 6. 158.

Holden (51)

(see under copper)

Homestake (101)

Loe: Sec. 1, (22-17E), on W. side of Peshastin Cr. near mouth of Culver Springs Gulch, Blewett dist. Prop: 1 claim. Owner: John Olden, Blewett, Wash. (1911). Ore: Gold, silver. Deposit: Quartz vein in serpentine. Dev: 165-ft. adit. Assays: General sample from mouth to face of adit assayed 0.04 oz. Au, 0.2 oz. Ag. Prod: Unknown amount. Ref: 67, p. 16. 161, p. 100.

Homestake and Star (18)

(see under silver)

Horseshoe Basin (8)

(see under lead)

Howe Sound

(see Holden under copper)

Humbug

(see under lead)

Hummingbird (102)

Loc: SE¼ sec. 2, (22-17E), in Culver Gulch, Blewett dist. Elev: 2,900 ft. Access: Road and trail. Prop: 1 claim. Owner: Washington Meteor Mining Co. (1908-1911). Ore: Gold, copper, silver. Ore min: Free gold, arsenopyrite, pyrite, chalcopyrite. Gangue: Quartz, calcite, talc. Deposit: Quartz-calcite vein cutting serpentine. Dev: 650-ft. crosscut and drift with stopes. Prod: Amount not known. Ref: 13, p. 137. 67, p. 11. 129, p. 272. 143, pp. 78-79. 144, p. 9. 161, pp. 84-89.

Hunter (41)

(see under silver)

I. X. L.

(see Blue Bell)

Idaho (42)

(see under copper)

Iowa

(see Eagle and Iowa)

Iowa (43)

Loc: Sec. 12, (31-18E), near Cascade Cr., Meadow Cr. dist. Access: Trail from mouth of creek on Lk. Chelan. Prop: 1 claim. Owner: W. H. Phelps (1897). Ore: Gold, silver. Deposit: 12-in. paystreak. Dev: 40-ft. adit. Assays: As high as \$60 Au, 200 oz. Ag reported. Ref: 63, p. 81. 67, p. 33.

Trene

(see Holden under copper)

Isoletta (19)

(see under silver)

Ivanhoe

(see Wilder)

Johnson (103)

Loc: SE¼ sec. 1, (22-17E). ¾ mi. N. of Blewett and extending from Peshastin Cr. eastward. Prop: 3 claims: April Fool, Venus, Donaldson. Owner: Mr. Johnson (1911). Ore: Gold. Gangue: Talc. Deposit: Broken indistinct veins cut through serpentine, diabase, and Peshastin formation near their contact with Swauk formation. Dev: 4 drifts and adits comprise 490 ft. of workings. Assays: One sample assayed 0.02 oz. Au, no Ag. Ref: 67, p. 16. 161, p. 101.

Jumbo (67)

Loc: On Chelan Butte. Owner: S. Fourtner. Ore: Gold. Ref: 67, p. 20.

Keefer Brothers

(see under molybdenum)

King Solomon (27)

(see under copper)

King Solomon (Pickwick)

(see Pickwick under copper)

King Solomon (Van Epps)

(see Van Epps under antimony)

Kingman

(see Galena under lead)

Kingman and Pershall (68)

Loc: On Chelan Butte. Ore: Gold. Ore min: Free gold. Deposit: 4-ft. vein. Assays: One assay as high as \$2,000 per ton. Prod: \$15,000 reported in the 1890's. Ref. 67, p. 20. 158.

Lake and Flora

Loc: In Doubtful Basin. Prop. 2 claims. Owner: G. L. Rouse and J. C. Rouse (1897). Ore: Gold, silver. Assays: \$28 Au, 40 oz. 'Ag. Ref: 67, p. 41.

Lake Shyall (25)

(see under copper)

La Rica (104)

(see also Black Jack, Peshastin, Gold Bond)

Loc: Sec. 2, (22-17E), Blewett dist. Prop. 3 claims: Peshastin, Keynote, Black Jack. Ore: Gold. Ref: 97, 1916, p. 610; 1921, p. 462. 98, 1925, p. 1801. 161, p. 89.

Last Chance

Loc: On Nigger Cr. Prop: 4 lode claims and 1 placer claim. Owner: Alpine Mining & Milling Co. (1918-1924). Ore: Gold. Ore min: Free gold. Deposit: Well-defined quartz vein 20 to 42 in. wide. Dev: 162-ft. crosscut. Assays: \$3.60 to \$72.80 per ton. Ref: 67, pp. 16-17. 98, 1922, p. 1631; 1925, p. 1801. 112, p. 164.

Last Chance (77)

Loc: T. 23 N., R. 15 E., in Solomon Cr. Gulch, E. of the Silver Fiend prospect. Owner: James Grieve, August Sasse, and Mrs. Churchill (1897). Ore: Gold, lead. Dev: 30-ft. crosscut, 25-ft. shaft. Assays: \$4.30 Au. Ref: 63, p. 62. 67, p. 28.

Leo

(see under copper)

Little Jap (30)

(see under silver)

Logan (16)

(see under lead)

Lone Rock (105)

Loc: SW¼ sec. 1, (22-17E), on E. side of Peshastin Cr., Blewett dist. Prop: 1 claim. Owner: John Olden, Blewett, Wash. (1911). Ore: Gold, silver. Gangue: Calcite. Deposit: Narrow belt of iron-stained serpentine with stringers of calcite. Dev: 88-ft. adit. Assays: General sample assayed 0.02 oz. Au, 0.2 oz. Ag. Ref: 67, p. 17. 161, p. 100.

Lucky King

(see Golden Eagle)

Lucky Queen (106)

Loc: SW¼ sec. 1, (22-17E), about ¼ mi. N. of Blewett on E. side of Peshastin Cr. Access: On Highway U. S. 97. Prop: 2 claims: Lucky Queen, Bee Queen. Owner: A. Neubauer, Blewett, Wash. (1938). Lucky Queen Mining Co. (1915). Ore: Gold, silver. Ore min: Free gold, chromite. Gangue: Talc, calcite, quartz. Deposit: Shear zone in serpentine from a stringer to 3 ft. in width. One small segregation of chromite encountered. Dev: 545-ft. adit, 412-ft. adit. Prod: About \$1,000 by 1901. Ref: 67, p. 11. 88, p. 58. 116, no. 4, 1908, p. 74. 143, p. 79. 144, p. 9. 161, pp. 97-99.

Lada

Loc: In Maple Cr. Basin, Stehekin dist. Owner: Gilkey & Co. (1897). Ore: Gold, silver. Assays: \$180 Au, Ag. Ref: 63, p. 84. 67, p. 41.

Manistee (107)

Loc: $SW\frac{1}{4}$ sec. 2, (22-17E), in Culver Gulch, Blewett dist. Prop: 1 claim. Ore: Gold, silver. Dev: 140-ft. drift. Assays:

\$16 per ton. **Prod:** 80 tons of ore in 1890. **Ref:** 63, pp. 73-74. 67, p. 12.

Marcus Stein (49)

(see under silver)

Marion

Loc: Blewett dist. Prop: 1 claim. Owner: Charles Donohue (1897). Ore: Gold, silver. Deposit: Three veins, one of which is 8 ft. wide. Dev: 375 ft. of drifts and crosscuts. Assays: \$6 to \$9 Au, Ag. Prod: Amount not known. Ref: 63, p. 73. 67, p. 12.

Marlin (14)

(see under copper)

Maryland

(see under lead)

Meadow Creek Strike (44)

(see under copper)

Meridian (129)

Loc: Sec. 4, (22-17E), on S. side of Nigger Cr. Ore: Gold, silver, copper, nickel. Deposit: Quartz vein cutting serpentine. Assays: \$10.50 Au, \$5 Ag, \$2.50 Cu, 2% Ni. Ref: 63, p. 76. 67, p. 17.

Michigan

(see under lead)

Minneapolis (21)

Loc: Sec. 32, (35-16E). Prop: 1 claim. Owner: William Keho and Joseph Lathrop (1897). Ore: Gold, silver, copper. Ore min: Sulfides. Dev: 40-ft. crosscut. Assays: \$18, Au, Ag, Cu. Ref: 63, p. 84. 67, p. 42.

Monarch (80)

Loc: Sec. 36, (23-17E), on W. side of Peshastin Cr. Prop: 2 claims. Ore: Gold, nickel, cobalt. Deposit: "Nickel ledge." Dev: 90-ft. adit. Assays: \$4 to \$5 Au, 2½% Ni, 1½% to 2½% Co. Ref: 63, p. 76. 67, p. 17.

Moscow (28)

(see under copper)

Mother Lode (63)

Loc: Sec. 17, (27-18E), at head of Deep Cr., Chiwawa dist. Access: Road and trail. Prop: 4 claims. Ore: Gold. Dev: 16-ft. adit. Ref: 63, p. 79. 67, p. 23.

Nebraska (29)

(see under copper)

Nelson

(see Pickwick under copper)

Nevada and Excelsion

Loc. On a fork of Jack Cr., a tributary to Icicle Cr., Leavenworth dist. Owner: John Bjork and A. Van Epps (1897). Ore: Gold, silver, nickel. Deposit: Vein of dolomite and quartz slightly mineralized. Dev: 26-ft. adit. Ref: 63, p. 66. 67, p. 28.

New York (81)

Loc: Center sec. 35, (23-17E), on divide between Nigger and Ingalls Creeks. Prop: 13 claims. Ore: Gold, silver, copper. Dev: Open pits and short adits. Assays: One sample assayed \$4.60 Au, 3½% Cu, tr. Ag; another sample assayed \$4 Au, \$30 Ag, and some Ni. Ref. 63, p. 75. 67, p. 17.

Nickel Plate

Loc: On headwaters of Nigger Cr. Access: Trail. Prop. 12 claims. Owner: John and William Lynch (1897). Ore: Gold, nickel. Ref: 63, p. 77.

North Pole (130)

Loc: Sec. 4, (22-17E), on Nigger Cr. Prop. 10 claims. Ore: Gold, silver, copper, nickel, mercury. Dev: A number of short adits. Ref: 63, p. 76. 67, p. 17.

North Star (108)

Loc: SE¼ sec. 2, (22-17E), on S. side and near upper end of Culver Gulch, Blewett dist. Prop: 1 claim. Owner: Golden Eagle Mining Co. (1911-1915). Ore: Gold. Ore min: Pyrite, arsenopyrite. Gangue: Quartz, calcite. Deposit: A 1- to 8-ft. fissure vein cutting serpentine. Dev: 125-ft. adit with stopes and raises, and 2 other adits totaling 320 ft. of length. Assays: Assays at various intervals across the vein av. \$1 to \$15 per ton. Av. of 1,000 tons shipped was \$20 per ton. Prod: 1,000 tons ore prior to 1907. Produced 1915. Ref: 67, p. 12. 97, 1915, p. 568. 161, pp. 93-94.

Ohio

(see under lead)

Olden (Eastern Star) (109)

Loc: SE¼ sec. 2, (22-17E), W. of the Black Jack and immediately S. of Peshastin mine, Blewett dist. Owner: John Olden (1902). Ore: Gold. Deposit: 2 veins varying in width from 1 to 6 ft. Dev: 350 ft. of underground work. Assays: 500 tons av. about \$5 Au. Prod: 500 tons of ore by 1902. Ref: 67, p. 12. 88, p. 59. 116, no. 4, 1908, p. 74. 143, p. 79. 144, p. 9.

Olympia (110)

(see also Gold Bond)

Loc: NW1/4 sec. 2, (22-17E), about 600 ft. below and due W. of U. S. Mineral Monument at head of Culver Gulch, Blewett dist. Prop: 1 claim (part of Blinn property). Owner: Gold Bond Mining Co., Spokane, Wash. (1951——). Ore: Gold. Ore min: Pyrite, arsenopyrite, chalcopyrite. Gangue: Quartz, calcite. Deposit: Small quartz lenses in a shear zone in serpentine. Dev: 910 ft. of crosscut and drifts. Ref: 63, pp. 72-73. 67, p. 17.

Ombompo (15)

Loc: E½ sec. 36, (35-14E), high on the divide between Doubtful and Boston Basins. Access: About 4 mi. of trail from the Stehekin road. Prop: 1 patented claim. Ore: Gold, silver, lead. Deposit: Vein 3 ft. wide. Assays: \$30 Au, Ag, Pb. Ref: 67, p. 42.

Ontario (131)

Loc: Sec. 4, (22-17E), N. of Nigger Cr. Ore: Gold, nickel, cobalt, copper. Ore min: Sulfides. Deposit: A wide mineralized zone in serpentine. Dev: 2 short adits and a shaft. Assays: \$7 to \$8 Au, 3% Ni, 3½% Cu. Ref: 43, 1895, p. 184. 63, p. 76. 67, pp. 17-18, 29. 105, 1895, p. 399. 141, p. 63.

Orphan Boy (45)

(see under silver)

P. I. (59)

Loc: Sec. 36, (29-16E), on Rock Cr. ½ mi. from its mouth, Chiwawa dist. Prop: 2 claims. Owner: Frank Schuenemann, Pasco, Wash. (1897). Ore: Gold, silver. Dev: 60-ft. adit. Ref: 63, p. 79. 67, p. 23.

P. P. Nickel (132)

Loc: Sec. 4, (22-17E), on Nigger Cr. Owner: Tony Preston, Leavenworth, Wash. (1897). Ore: Gold, nickel. Deposit: 3- to 4-ft. quartz vein. Dev: A shaft. Assays: \$4.50 Au, and a good percentage of Ni. Ref: 63, p. 76. 67, p. 18.

Palmer (64)

Loc: Sec. 17, (27-18E), at head of Deep Cr., Chiwawa dist. Access: Road and trail. Prop: 5 claims. Owner: Cable Mining Co., Seattle, Wash. (1897). Ore: Gold. Dev: Open cuts and a short adit. Assays: \$186 Au reported. Ref: 63, p. 79. 67, p. 23.

Panama No. 2 (9)

(see under lead)

Pangborn (69)

Loc: SW1/4 sec. 25, (26-20E), 1½ mi. E. of the Rex mine, Entiat dist. Access: Good road to mine. Prop: 80 acres. Owner: Leased from State by P. C. Pangborn, Wenatchee, Wash. (1938). Ore: Gold, silver. Ore min: Free gold. Deposit: Several quartz veins from 3 in. to 3 ft. wide cut decomposed gneiss. Dev: 180-ft. adit, 60-ft. shaft, 40-ft. shaft, numerous open cuts and short adits. Assays: Ore that was milled ran about ½ oz. Au. Prod: Amount not known. Ref: 67, p. 25. 158.

Pershall

(see Kingman and Pershall)

Peshastin (Blewett, La Rica) (111)

(see also Blewett, La Rica, Gold Bond)

Loc: SE¼ sec. 2, (22-17E), in lower Culver Gulch 1.200 ft. W. of old town of Blewett. Elev: 2,400 to 2,480 ft. Access: Road. Prop: 8 claims. Owner: Gold Bond Mining Co., Spokane, Wash. (1952—). Amalgamated Gold Mines Co. (1918-1925). La Rica Consolidated Mining Co. (1906). Washington Meteor Mining Co. (1908-1911). Ore: Gold. Ore min: Free gold, arsenopyrite, chalcopyrite, pyrite, galena, stibnite. Gangue: Quartz, calcite. Deposit: Lenticular lenses filling a shear zone in serpentine. Some lenses were 100 ft. long and as much as 8 ft. thick. Dev: 3 adits, the Meteor with 700 ft. of drifts, the Peshastin with 1,300 ft. of drifts and crosscuts, and the Draw with 480 ft. of workings. Many stopes in the adits. Assays: 22 tons shipped in 1940 returned 0.81 oz. Au, 0.13 oz. Ag, 0.09% Cu. Prod: About \$60,000 by 1902, 22 tons in 1940. Ref: 63, p. 73. 67, p. 12. 88, p. 58. 97, 1906, p. 366; 1921, p. 426. 98, 1920-1926. 112, 1918, p. 164. 116, no. 4, 1908, p. 74. 129, pp. 271-275. 143, p. 79. 144, p. 9. 158. 159, p. 128, 161, pp. 84-89.

Phipps (112)

(see also Gold Bond)

Loc: SW1/4 sec. 2, (22-17E), on Nigger Cr. drainage just over the ridge from head of Culver Gulch, Blewett dist. Access: Tractor road up Culver Gulch. Owner: Gold Bond Mining Co., Spokane, Wash. (1938——). Ore: Gold. Ore min: Free gold, chalcopyrite, arsenopyrite, pyrite. Deposit: Quartz vein varying from a thin seam to 5 ft. in width cuts serpentine. Dev: Several hundred feet of crosscuts, drifts, and stopes. Prod: Amount not known. Ref: 67, p. 12.

Phoenix (113)

Loc: Sec. 2, (22-17E), in Culver Gulch, Blewett dist. Ore: Gold. Gangue: Quartz. Dev: 3 drifts with stopes. Assays: Av. \$20 Au on a large tonnage. Prod: 1,000 tons of ore prior to 1897. Ref: 63, p. 73. 67, p. 13.

Phyllis (46)

(see under copper)

Pickwick

Loc: Blewett dist. Ore: Gold, silver. Ref: 67, p. 18.

Pickwick (76)

(see under copper)

Pole Pick (114)

(see also Gold Bond)

Loc: SW1/4 sec. 2, (22-17E), on S. side of Culver Gulch about 1/2 mi. W. of Blewett. Access: Tractor road. Prop. 1 patented claim: Pole Pick No. 1. Owner: Gold Bond Mining Co. (1943——) leasing to Calton Mining Co. (1949-1952). Ellinor Mining Co. (1911). Ore: Gold. Ore min: Free gold, pyrite. Gangue: Quartz. Deposit: Main vein is 1 to 4 ft. wide. 2 subsidiary veins also occur. All 3 are in serpentine. Dev:

2 crosscuts with raises, drifts, and stopes total about 2,000 ft. of length. Assays: Ore extracted before 1901 is said to av. \$10 to \$132 Au. Ore mined 1942-1947 av. \$35.82 Au. Prod: Est. production by 1901 was 8,000 tons of ore valued at \$70,000. 1937, 1941, 1942 (291 tons), 1946 (90 tons), 1947 (81 tons), 1948 (19 tons), 1949 (20 tons), 1950 (20 tons), 1951 (20 tons). Ref: 13, p. 137. 63, p. 73. 67, p. 13. 68, p. 6. 88, p. 59. 97, 1935, p. 352. 133, p. 31. 143, p. 79. 144, p. 9. 158. 161, p. 92.

Pole Pick No. 2

(see Alta Vista)

Prairie Dog

Loc: Entiat dist. Ore: Gold, silver. Prod: Unknown amount in 1910. Ref: 67, p. 25.

Prospect (115)

Loc: SW¼ sec. 2, (22-17E), on N. slope of ridge leading down to Culver Springs Gulch, Blewett dist. Prop: 5 claims: Sunset, Sunset Extension, Redjacket, Katy, Lone Star. Owner: Prospect Mining & Milling Co. (1911). Ore: Gold, silver. Gangue: Quartz, calcite, talc. Deposit: Oxidized vein in serpentine. Dev: Small openings on all of the claims. Prod: Ore was treated in an arrastre in "early days." Ref: 67, p. 13. 161, pp. 99-100.

Quien Sabe (10)

(see under lead)

Rainbow Nos. 2 and 3 (116)

Loc: Sec. 2, (17-22E), Blewett dist. Owner: Blewett Pass Mining Co. (1934). Ore: Gold. Ref: 67, p. 18. 158.

Rainier (133)

Loc: Secs. 3 and 4, (22-17E), on Nigger Cr. Access: Road. Prop: 13 claims. Owner: Negro Creek Nickel & Copper Mining Co. (1897). Ore: Gold, silver, copper, nickel. Deposit: Quartz veins and "nickel ledges." Dev: Several adits. Assays: \$5.20 to \$8.20 Au, 2½% to 3½% Ni. Ref: 63, p. 75. 67, p. 18. 105, 1895, p. 415.

Ray

(see Roy and Ray)

Raymond (50)

(see under silver)

Red Butte (82)

Loc: Sec. 36, (23-17E), on E. side of Peshastin Cr. Prop: 3 claims. Ore: Gold, nickel, cobalt. Deposit: "Nickel ledge." Dev: An adit. Ref: 63, p. 76. 67, p. 18.

Red Cap (53)

Loc: Sec. 9, (30-16E), on Phelps Ridge, Chiwawa dist. Prop: 20 claims. Probably part of the property held by the Royal Development Co. (1941). Owner: Una Mining & Milling Co., Seattle, Wash. (1897). Ore: Gold, silver, copper. Ore min: Chalcopyrite, pyrite, arsenopyrite. Dev: 52-ft. crosscut. Assays: \$3.50 to \$72 Au. Ref: 63, p. 78. 67, p. 23.

Red Cloud and Tralee

(see under copper)

Red Hill (54)

Loc: Sec. 15, (30-16E), on Phelps Ridge, Chiwawa dist. Prop: 10 claims. Probably part of the property held by the Royal Development Co. (1941). Owner: Red Hill Mining Co. (1897). Ore: Gold, silver, copper. Ore min: Copper and iron sulfides, arsenopyrite. Dev: 2 short adits. Assays: \$2.50 to \$29 Au, Ag. Ref: 63, p. 78. 67, p. 23.

Red Mountain (55)

(see under copper)

Rex (Rogers) (71)

Loc: N½ sec. 36, (26-20E), in Crum Canyon, tributary to Entiat R. Access: 12 mi. by road to railroad at Entiat. Prop: 80 acres. Owner: State land leased to Bert Rogers, Entiat, Wash. (1943). Wenatchee Gold Mining Co. (1906-1922). Ore: Gold, silver. Ore min: Pyrite. Deposit: 2 oxidized quartz veins 3 to 12 in. wide in decomposed gneiss. Dev: 3 adits totaling about 500 ft. of length. Improv: A 2-stamp mill (1938). Assays: Most of the ore milled av. about 1 oz. Au. Prod: More than \$170,000 by 1930. Small amounts in 1933, 1934, and 1940. Ref: 43, 3/13, p. 592. 67, p. 25. 97, 1907-1908, 1911-1915, 1917, 1934, 1935, 1940. 98, 1920-1925. 104, 6/15/32, p. 27. 105, 1906, p. 115. 106, 5/19/32. 112, p. 211. 158.

Robischaud (56)

(see under molybdenum)

Rogers

(see Rex)

Roscoe Conkling

(see under lead)

Rouse (11)

(see under lead)

Roy and Ray (117)

Loc: Sec. 2, (22-17E), Blewett dist. Owner: Blewett Pass Mining Co. (1934). Ore: Gold. Ref: 67, p. 18. 158.

Royal

(see Red Mountain under copper)

Safety Harbor Creek

(see Robischaud under molybdenum)

Sailor Boy

Loc: Bridge Cr. area, Stehekin dist. Owner: Gilkey & Co. (1897). Ore: Gold, silver. Assays: \$25 Au, 18 oz. Ag. Ref: 63, p. 84. 67, p. 43.

Sandell (118)

Loc: SE¼ sec. 2, (22-17E), in Culver Gulch, Blewett dist. Elev: 2,660 ft. Prop: 1 claim, part of Washington Meteor holdings. Owner: Washington Meteor Mining Co. (1908-1911). Blewett Mine Leasing Co. (1910). Ore: Gold. Ore min: Free gold, arsenopyrite, pyrite. Gangue: Quartz, calcite, talc. Deposit: Quartz-calcite vein cutting serpentine. 1 ore shoot mined av. 2 to 6 ft. thick. Dev: 300 ft. of crosscut and a large amount of drifting on the vein. Prod: Amount not known. Ref: 67, p. 13. 129, p. 274. 161, pp. 84-89.

Savage

Loc: T. 26 N., R. 20 E., 10 mi. up Entiat R. from town of Entiat. Prop: 4 claims, and State land held under 30-yr. lease. Owner: G. S. Savage, Entiat, Wash. (1918). Ore: Gold, silver. Ore min: Free gold. Dev: 100-ft. shaft, short adits. Ref: 67, p. 26.

Silver Fiend (75)

(see under lead)

Silver Jack (22)

(see under lead)

Silver King (47)

(see under copper)

Silver Trail (48)

(see under copper)

Snook and Ellen

(see Van Epps under antimony)

Snowflake

Loc: Blewett dist. Owner: John Kendle and Henry Weinmann (1897). Ore: Gold. Deposit: 6-ft. quartz vein. Assays: \$7 Au (1897). Ref: 63, p. 74. 67, p. 18.

Spokane Boy and Girl (12)

(see under copper)

Sauillchuck

(see Golden King)

Star

(see Homestake and Star under silver)

Stehekin Mining Co.

(see under copper)

Summit (17)

(see under lead)

Sunday Morning (31)

(see under silver)

Sunset (122)

Loc: Sec. 6, (22-18E), Blewett dist. Prop: 1 claim. Ore: Gold, copper. Ore min: Sulfides. Deposit: 6-ft. mineralized zone. Dev: 60-ft. adit, 30-ft. adit. Assays: \$10 to \$15 Au (1897). Ref: 63, p. 74. 67, p. 19.

Sunset (72)

Loc: Sec. 30, (26-21E), Entiat dist. Owner: Wenatchee Gold Mining Co. (1906-1922). Ore: Gold. Ref: 67, p. 26. 97, 1912, p. 920.

Sunset

Loc: On Flat Cr., Stehekin dist. Prop. 3 claims. Owner: J. M. Scheuyeaulle and others (1897). Ore: Gold. Assays: As high as \$60 Au. Ref: 63, p. 83. 67, p. 44.

Sunshine (70)

Loc: Sec. 36, (26-20E), Entiat dist. Access: 12 mi. by road to railroad at Entiat. Prop: 40-acre State lease. Owner: Leased by P. C. Pangborn, Wenatchee, Wash. (1935). Ore: Gold. Ore min: Free gold. Dev: 100-ft. shaft, 730-ft. adit. Assays: \$14.96 to \$306.00 Au. Ref: 158.

Tiger

(see Galena under lead)

Tiger (24)

Loc: Sec. 4, (34-16E), on N. Fk. Bridge Cr. Access: Road and trail from Stehekin. Prop. 7 claims. Owner: E. S. Ingraham, H. O. Hollenbeck, Van Smith, Prof. Piper, George Young, and H. W. Carr (1897). Ore: Gold, lead, copper, silver. Ore min: Sulfides. Gangue: Quartz. Dev: Several open cuts and a shallow shaft. Assays: \$6 to \$24 Au, \$8 Ag. Ref: 63, p. 84. 67, p. 44.

Tip Top (119)

Loc: SE1/4 sec. 1, (22-17E), E. of the Eureka mine, Blewett dist. Prop: 1 claim. Owner: Tip Top Mining Co. (1911). Ore: Gold. Ore min: Free gold. Gangue: Quartz. Deposit: Vein av. 2½ ft. in width cuts serpentine and brecciated rock of the Hawkins formation. Dev: 500 to 600 ft. of adit. Ore treated in an arrastre in 1901. Assays: Oxidized ore near surface av. \$40 per ton; deeper ore av. \$25 per ton. Prod: About \$10,000 by 1901, small amount in 1940. Ref: 63, p. 74. 67, p. 13. 88, pp. 57-58. 97, 1941, p. 472. 116, no. 4, 1908, p. 74. 143, p. 79. 144, p. 9. 161, pp. 95-96.

Tommy Jack (23)

Loc: SE¼ sec. 30, (35-16E), a few hundred feet S. of N. Fk. of Bridge Cr. Elev: 4,450 ft. Access: About 11 mi. of trail from road at mouth of Bridge Cr. Owner: E. O. Blankenship,

Stehekin, Wash. (1940). Ore: Gold. Ore min: Pyrite. Dev: 85-ft. adit. Ref: 67, p. 44.

Tralee

(see Red Cloud and Tralee under copper)

Union and Dominion (134)

Loc: Sec. 9, (22-17E), 34 mi. up Bear Cr. from Nigger Cr. Prop: 2 claims. Ore: Gold, silver. Dev: 100-ft. adit. Assays: A shipment av. \$11.30 Au, Ag. Prod: 8 tons before 1897. Ref: 63, p. 75. 67, pp. 13-14.

Van Epps (Snook and Ellen) (74)

(see under antimony)

Van Epps Copper

(see Pickwick under copper)

Velma (78)

(see under mercury)

Venus (120)

Loc: Sec. 1, (22-17E), Blewett dist. Ore: Gold, silver. Ref: 67, p. 19.

War Eagle (135)

Loc: NE¼ sec. 3, (22-17E), on both sides of Nigger Cr. about a mile from its mouth. Access: Road. Prop. 4 claims. Ore: Gold, nickel. Deposit: Quartz veins cutting granite, slate, and serpentine. Dev: Several shafts and adits. Assays: \$4.60 to \$60 Au, some Ni. Ref: 63, p. 75. 67, p. 19.

Warrior General

Loe: Blewett dist. Ore: Gold. Prod: Has produced. Ref: 116, no. 4, 1908, p. 74.

Well Known

Loc: On Company Cr., Stehekin dist. Owner: Dennis Mc-Donald and William Stillwell (1897). Ore: Gold. Deposit: Wide zone mineralized with pyrite. Ref: 63, p. 84. 67, p. 44.

Wenatchee

(see Golden King)

White Elephant

(see Wilder)

White Star

(see under lead)

Wilder, (Ivanhoe, White Elephant) (121)

(see also Gold Bond)

Loc: SW1/4 sec. 2, (22-17E), on N. side of Culver Gulch and S. side of Nigger Cr., Blewett dist. Prop: 3 claims: Kennilworth, Amber Glee, Ivanhoe. Owner: Gold Bond Mining Co., Spokane, Wash. (1937——). Ore: Gold, silver, copper. Deposit: A 2- to 6-ft. vein. Dev: Several crosscuts and drifts total about 500 ft. of length. Assays: Tr. to \$72 Au, with a very little Ag and Cu. Av. assay is \$4.50 per ton. Prod: Est. 150 tons of ore prior to 1911. 1915, 1917, 1937. Ref: 63, p. 73. 67, p. 14. 88, p. 59. 97, 1915, p. 568; 1916, p. 610; 1917, p. 500. 104, 11/15/36, p. 27; 1/15/37, p. 28. 106, 6/18/31, p. 19. 113, 7/1/37, p. 16. 158. 161, pp. 96-97.

Wright

Loc: Blewett dist. Ore: Gold. Prod: 1934. Ref: 97, 1935, p. 352.

Wye

(see Bobtail)

Yankee Doodle

Loc: Blewett dist. Ore: Gold. Assays: \$4 Au. Ref: 63, p. 74.

CLALLAM COUNTY

Angeles Star (1)

(see under zinc)

Deer Park

(see under copper)

Gregory-Savage

(see Angeles Star under zinc)

Port Angeles (2)

Loc: On Melick farm, between Ennis Cr. and head of White Cr., probably in sec. 23, (30-6W). Access: Road. Prop. 43 acres of deeded farm land. Owner: Mrs. Grace Melick, Port Angeles, Wash. (1950). Ore: Gold and silver reported. Ore min: Pyrite. Gangue: Quartz. Assays: One assay showed about \$1 Ag, \$123 Au, but two other assays showed only \$1.50 and \$2.10 Au. Ref: 158.

Winter

(see Angeles Star under zinc)

CLARK COUNTY

Golden Wonder (1)

(see under mercury)

Silver Star (2)

(see under copper)

Washington

Loc: Washougal dist. Ore: Gold. Ref: 105, vol. 105, 1912, p. 811.

COLUMBIA COUNTY

Hoffeditz (1)

Loc: SW4/NE4/4 sec. 3, (9-41E), near N. end of Hoffeditz farm. Elev: 100 to 200 ft. above river. Ore: Gold. Deposit: Schistose rocks intruded by diorite which reportedly carries good gold values. Dev: Open cut. Ref: 158.

COWLITZ COUNTY

Green Mountain (1)

Loc: Sec. 6, (5-1E), near Woodland. Prop: Deeded land. Owner: Margaret Hurtienne, Kelso, Wash. Ore: Gold, silver, lead, zinc, copper. Ore min: Pyrite. Deposit: Fault in andesite, with weak hydrothermal alteration along the walls. Gouge and altered walls contain finely crystalline pyrite. Dev: Small open cut. Assays: 2 samples showed only traces of gold and very low values in silver, lead, zinc, copper. Ref: 157. 158.

FERRY COUNTY

Ada

(see Laura S. under lead)

Addison (153)

(see under copper)

Admiral (43)

Loc: Sec. 35, (37-32E), Republic dist. Ore: Gold. Ref: 58, p. 2. 63, p. 109.

Advance (50)

(see also Consolidated Mines and Smelting Co., Ltd., under copper)

Loc: Secs. 12 and 13, (36-32E), just S. of Old Republic mine, Republic dist. Prop. Patented. Part of Consolidated Mines and Smelting Co., Ltd. property. Owner: Consolidated Mines and Smelting Co., Ltd., Wenatchee, Wash. (1940). Ore: Gold, silver. Ref: 57, p. 2. 158.

Advance (Cabin) (86)

(see under silver)

Algonkian (74)

(see under silver)

Alpine (20)

Loc: Sec. 27, (37-32E), Republic dist. Owner: Knob Hill Mines, Inc., Republic, Wash. Ore: Gold, silver. Assays: \$5 Au, Ag. Ref: 158.

Anchor

(see under silver)

Anecia (21)

Loc: Sec. 33, (37-32E), Republic dist. Owner: Dr. May, Republic, Wash. (1940). Ore: Gold, silver. Prod: Unknown amount in 1940 and 1941. Ref: 97, 1940, p. 477; 1941, p. 473.

Apollo

(see California)

Aurum

(see Day Mines)

Belcher (14)

(see under iron)

Belcher (154)

(see under copper)

Ben Hur (22)

(see also Day Mines)

Loc: Center of line between secs. 34 and 27, (37-32E). Elev: 2,800 ft. Access: About 2 mi. NW. of Republic by road on W. side of Eureka Gulch. Prop: 1 claim adjoining the Trade Dollar on south. Owner: Day Mines, Inc. (1951---). Ben Hur Gold Mining Co. (1907-1908). Ben Hur Mining & Milling Co. (1908). Ben Hur Leasing Co. (1909-1924). Aurum Mining Co. (1935-1950). Ore: Gold, silver. Ore min: Pyrite. Gangue: Quartz, calcite. Deposit: 4-ft. quartz vein in propylitic latite porphyry. Composed of fine-grained banded quartz and 10% to 30% calcite. Vein said to extend the length of the claim. Dev: 300-ft. shaft, winze, and drifts on 3 levels. Assays: Smelter assays of ore shipped show \$15 Au, 4.5 oz. Ag. In 1910, \$6 to \$10 per ton. Prod: \$65,000 up to 1910, 1909-1915, 1918, 1933, 1949, 1950. Ref: 7, p. 163. 88, pp. 20-21. 97, 1910-1919, 1932-1934. 98, 1918, 1920, 1925. 104, 1/30/33, p. 19. 106, 2/18/32. 114, no. 5, 1909. 153, pp. 50-52. 158.

Big Bug (87)

(see under silver)

Big Lake (68)

(see under lead)

Black Hawk (88)

(see under lead)

Black Tail (Hope) (23)

(see also Day Mines)

Loc: Near E. ¼ cor. sec. 34, (37-32E), S. of the Lone Pine and N. of the Quilp. Access: 1 mi. NW. of Republic by road. Prop: 1 claim. Owner: Day Mines, Inc. (1951——). Hope Mining Co. (1910-1915). The Hope Co. (1918). Northport Smelting & Refining Co. (1920-1926). Surprise Mining Co. (1924-1926). Ore: Gold, silver. Deposit: Several quartz veins 2 to 6 ft. wide in quartz latite porphyry and propylitic andesite. Dev: Crosscut adit 300 ft. long, drifts, and 600-ft. inclined shaft. Workings total about 2,000 ft. Assays: 300 tons produced prior to 1902 ranged from \$13 to \$20 per ton. Prod: 1909-1910, 1912-1920, 300 tons prior to 1902. Ref: 7, p. 159. 88, p. 20. 97, 1910-1921, 1935. 98, 1922-1926. 112, p. 206. 114, no. 5, 1909. 129, pp. 186-187. 153, pp. 56-57.

Black Thorn (111) (see under lead)

Blaine Republic

(see Republic)

Blevins

(see Meadow Creek under copper)

Blue Bell-Belcher

(see Belcher under iron)

Blue Horse (63)

(see under silver)

Blue Jacket (64)

(see under silver)

Blue Mountain

(see Jennie)

Bodie (24)

Loc: Sec. 34, (37-32E), Republic dist. Owner: Zwang, Ivan and Co. (1933). Ore: Gold, silver. Ref: 106, 4/6/33.

Boston and Butte

(see Butte and Boston)

Brimstone

(see Paul and Brimstone)

Buffalo (139)

(see under silver)

Burlington and Delaware (143)

(see under lead)

Butte and Boston (Boston and Butte) (51)

Loc: SW¼ sec. 12, (36-32E), Republic dist. Owner: Blaine-Republic Co. (1932). Anaconda Gold Mining & Reduction Co. (1914). Alliance Mining Co. (1918-1926). Ore: Gold, silver. Deposit: 2½- to 5-ft. quartz vein cuts andesite porphyry. Same vein as on Princess Maude property. Dev: 265-ft. shaft, 75-ft. shaft, 285-ft. adit, 35-ft. adit, and 400 ft. of drifts (1902). Assays: Av. \$16 per ton, \$14 of which is in gold. Ref: 88, p. 22.

Butterfly (89)

(see under lead)

Byrne (147)

(see under silver)

Cabin

(see Advance under silver)

California (Apollo) (61)

Loe: SW 4SW 4 sec. 20, (36-34E), on Wabash Cr., Republic dist. Elev: 4,200 ft. Access: 11 mi. E. of Republic by road. Prop: 2 claims: Colorado, Shonneen. Owner: New California Mining Co., Wenatchee, Wash. (1949). Apollo Consolidated Gold Mining Co. (1903-1925). Ore: Gold, silver. Ore min: Galena, chalcopyrite, sphalerite, malachite, azurite. Deposit: Quartz vein along fracture zone in greenstone and argillite. Dev: 525-ft. shaft, 80-ft. adit. Assays: \$60 Au, Ag. Prod: 1901-1902, 1908, 1914-1916, 1927-1929, 1938-1939. Ref: 7, p. 201. 33, 1907, p. 316. 68, p. 14. 97, 1908, 1915-1917, 1928-1930, 1939, 1940. 98, 1922, p. 1633; 1925, p. 1803. 100, 1901, pp. 18, 50, 88; 1902, pp. 14, 132; 1903, pp. 14, 35. 112, 1918, p. 166. 158.

Chance (90)

(see under silver)

Cherokee Strip (79)

(see under silver)

Chico (52)

Loc: Near center E½ sec. 12, (36-32E). Access: 1 mi. by road S. of Republic. Prop: 1 claim. Owner: Blaine-Republic

Co. (1932). Anaconda Gold Mining & Reduction Co. (1914). Alliance Mining Co. (1918-1926). Chico Mining Co. (1932). Ore: Gold. Ore min: Pyrite. Deposit: 18-in. quartz-calcite vein cutting andesite. Probably an extension of the Princess Maude vein. Dev: Adit. Ref: 7, p. 154. 98, 1918-1926. 106, 7/21/32, p. 7. 112, p. 164.

Clay (145)

(see under copper)

Colorado (91)

(see under lead)

Congress (141)

(see under nickel)

Consolidated Mines and Smelting Co., Ltd.

(see under copper)

Cook (53)

Loc: NW $\frac{1}{4}$ sec. 12, (36-32E), Republic dist. **Ore:** Gold. **Ref:** 106, $\frac{4}{6}$ 33.

Copper Key (12)

(see under copper)

Cougar (158)

(see under copper)

Cuba

(see Big Lake under lead)

Cyprus

Loc: 3 mi. S. of Danville. Access: Railroad. Prop. 4 claims, 2 fractions. Owner: Cyprus Mining Co. (1924-1926). Ore: Gold, silver, lead. Improv: 500-ft. crosscut. Ref: 98, 1925, p. 1813; 1926, p. 1577. 112, p. 175.

Dan Patch (72)

(see under silver)

Danville

Loc: Danville dist. Ore: Gold, copper. Prod: 4 cars, 1934. Ref: 97, 1935, p. 352.

Day Mines (Aurum)

(see also Surprise, Little Cove, Last Chance, San Poil, Ben Hur, Insurgent, Lone Pine, Tom Thumb, Trade Dollar, Black Tail, Pearl, Quilp, South Penn)

Loc: Republic dist. Prop: At least 92 patented claims. Owner: Day Mines, Inc., Wallace, Idaho (1951——). Formerly operated through a subsidiary: Aurum Mining Co. (1935-1950). Ore: Gold, silver. Ore min: Tellurides, free gold. Gangue: Quartz, calcite. Deposit: Veins in andesite porphyry. Dev: Deepest workings 900 ft. (1939). Assays: Av. 0.15 oz. Au, 1 oz. Ag. Prod: Considerable. See individual mines for details. Ref: 107, 11/39.

Delaware

(see Burlington and Delaware under lead)

Dixie Queen (112)

Loc: Near center sec. 33, (32-36E), Covada dist. Prop: 1 claim. Ore: Gold (?). Ore min: Pyrite. Gangue: Quartz. Deposit: 2-ft. vein cutting quartzite. Dev: 2 shafts, one 10 ft. deep. Ref: 122, p. 156. 163, p. 75.

Drummond (92)

(see under lead)

East San Poil (25)

Loc: Sec. 34, (37-32E), Republic dist. Owner: Zwang, Ivan and Co. (1933). Ore: Gold, silver. Ref: 106, 4/6/33.

El Caliph (26)

Loc: SW¼ sec. 34, (37-32E), just E. of the Morning Glory property, Republic dist. Access: 2 mi. by road to railroad. Prop: 1 patented claim: El Caliph. Owner: E. D. Hougland, Republic, Wash. (1941). Ore: Gold, silver. Ore min: Free gold, pyrite. Gangue: Quartz, calcite. Deposit: ½- to 18-in. vein cutting quartz latite and shales. Vein displaced by minor faults. Dev: Adit and shaft totaling 450 ft. (1902). Assays: 85 tons of ore produced prior to 1902 yielded \$9,000. Prod: Est. \$15,000 to \$20,000 to end of 1936. Produced 1916, 1933, 1934, 1937-1939. Ref: 88, p. 21. 97, 1916, 1934, 1935, 1938-1940. 153, p. 65. 158.

Emma

(see Standard and Emma)

Etta (110)

(see under lead)

Eureka

(see Quilp)

Faithful Surprise

(see Morning Star)

Five Hundred (127)

(see under silver)

Flag Hill (54)

Loc: Secs. 1 and 2, (36-32E). Access: 1½ mi. from Republic by road. Prop: 8 unpatented claims. Owner: Flag Hill Mines, Inc. (1949——). Ore: Gold, silver, selenium. Gangue: Quartz, calcite. Deposit: Said to be a 5-ft. vein with an est. length of 1,500 ft. Dev: 1,500 ft. of adit, three 50-ft. shafts, and a 100-ft. shaft. Total length of workings about 4,000 ft. Assays: Typical assay said to be 0.21 oz. Au, 0.61 oz. Ag. Prod: Said to be 400 tons prior to 1940. 1941. Ref: 28, pp. 62-66. 69, p. 7. 97, 1939, p. 490; 1940, p. 477. 113, no. 13, 1937, p. 7. 158.

Galena (69)

(see under silver)

Gold Cord

(see Byrne under silver)

Gold Crown

(see under silver)

Gold Dust

Loc: On headwaters of Toroda Cr. Ore: Gold. Ref: 63, p. 109.

Gold Twenty (78)

Loc: NW1/4 sec. 5, (32-36E), 3 mi. N. of Meteor, Covada dist. Ore: Gold, silver, lead, zinc. Ore min: Galena, sphalerite, pyrite. Gangue: Quartz, calcite. Deposit: Black argillite crisscrossed by sulfide-bearing quartz veinlets. Dev: 175-ft. crosscut. Ref: 58, p. 26. 122, p. 175.

Golden Chariot (148)

Loc: Near W. line of sec. 30, (30-33E), Keller dist. Ore: Gold. Ore min: Limonite. Gangue: Quartz. Deposit: Oxidized portion of a 5-ft. vein consisting of porous quartz and limonite is exposed in a pit. Dev: Pit. Ref: 122, p. 125.

Golden Eagle (44)

Loc: SE¼ sec. 35, (37-32E), Republic dist. Prop. 4 claims: Admiral, Peacemaker, Eureka, Battle Axe. Owner: Hermes Mining Co. (1925). Ore: Gold, silver. Ref. 97, 1925, p. 558. 114, no. 5, 1909, p. 67.

Golden Harvest (62)

Loc: Sec. 36, (36-32E). Access: 7 mi. from Republic by road. Prop: 7 patented claims. Owner: Otto Harrison, Wenatchee, Wash. (1941). Golden Harvest Mining Co. (1932-1937). Ore:

Gold, silver. **Deposit:** Said to be a $2\frac{1}{2}$ -ft. vein with an estlength of 150 ft. **Dev:** 1,600-ft. adit and several shafts. **Assays:** Typical assay said to be 0.12 oz. Au, 2.0 oz. Ag. **Prod:** 800 tons in 1937-1938. **Ref:** 28, pp. 112-116. 97, 1939, p. 490. 104, 6/15/35, p. 27; 2/15/35, p. 30; 9/30/36, p. 29; 1/30/37, p. 30. 106, 1/21/32. 158.

Golden Rule (149)

Loc: Near center W½ sec. 30, (30-33E). Ore: Gold (?). Ore min: Pyrite. Gangue: Quartz. Deposit: Open cut exposes a 12-in. vein consisting of quartz banded with finely divided pyrite and an unidentified sulfide mineral. Dev: Open cut. Ref: 122, p. 125.

Golden Valley

(see Valley)

Good Ore (105)

(see under silver)

Grandview (126)

(see under lead)

Gray (155)

(see under silver)

Greasy Run (129)

(see under lead)

Great Republic

Loc: Republic dist. Ore: Gold. Ref: 63, p. 109. 134.

Great Scott (73)

(see under lead)

Gwin (70)

(see under silver)

Hall Creek (see Gwin t

(see Gwin under silver)

Hawkeye (13)

Loc: NE¼ sec. 6, (37-34E), Belcher dist. Prop: 8 claims: Hawkeye, Hawkeye No. 3, Struck Luck, Eagle, Governor Rogers, Laughing Water, St. Barnard, Waterloo. Owner: Winnipeg Mining Co. (1907-1918). Ore: Gold, silver, copper, iron. Prod: 1907. Ref: 33, 1907, p. 1164; 1908, p. 1431. 98, 1918, p. 148. 116, no. 11, 1907, p. 27.

High Line

Loc: Republic dist. Ore: Gold, silver. Prod: 1934. Ref: 97, 1935, p. 352.

Hines (140)

(see under lead)

Hope

(see Black Tail)

I. X. L. (130)

(see under lead)

Iconoclast (160)

(see under copper)

Ida May (27)

Loc: SW1/4 sec. 34, (37-32E), Republic dist. Access: 2 mi. by road to railroad. Prop: 1 patented claim: Ida May. Owner: E. D. Hougland, Republic, Wash. (1941). Ore: Gold, silver. Deposit: Small vein. Dev: 50-ft. adit. Prod: 1914. Ref: 97, 1914, p. 649. 158.

Idora (128)

(see under lead)

Illinois (161)

(see under copper)

Imperator

(see Quilp)

Insurgent (45)

(see also Day Mines)

Loc: Near W. line NW ¼ sec. 35, (37-32E). Access: 1 mi. NW. of Republic by road. Prop: 1 fractional claim adjoining the Lone Pine on the east. Owner: Day Mines, Inc., Wallace, Idaho (1951——). Insurgent Gold Mining Co. (1908-1924). Aurum Mining Co. (1935-1950). Ore: Gold, silver. Ore min: Pyrite, gold. Gangue: Quartz. Deposit: Vein believed to be an offshoot of the Lone Pine vein cuts propylitic andesite. Ore shoot 30 ft. long and 2½ ft. wide now stoped out. Dev: Opened by adits on Lone Pine claim. Prod: 1908-1912, 1927. Ref: 7, p. 162. 97, 1908-1912, 1927. 98, 1920-1925. 104, 10/30/35, p. 25; 2/29/36, p. 27. 112, p. 184.

Iron Creek

(see Shamrock under nickel)

Iron Mask (28)

Loc: SE¼ sec. 34, (37-32E). Access: 1 mi. from Republic by road. Prop: 1 patented claim. Owner: P. B. Chapman, Republic, Wash. (1941). Ore: Gold, silver. Deposit: Said to be an 8-ft. vein with an est. length of 400 ft. Dev: 49-ft. adit and other workings total 150 ft. Assays: Typical assay said to be 0.12 oz. Au, 0.12 oz. Ag. Ref: 28, pp. 92-96.

Iron Monitor (55)

Loc: Sec. 12, (36-32E). Access: ½ mi. by road to railroad at Republic. Prop: 1 patented claim: Iron Monitor. Owner: C. M. Trevitt and E. Hougland, Republic, Wash. (1941). Ore: Gold, silver. Gangue: Quartz. Dev: 15-ft. shaft, 400-ft. adit. Ref: 158.

Iron Mountain (65)

(see under silver)

Jaybird (80)

(see under lead)

Jennie (Blue Mountain, Patterson) (6)

Loc: S½ sec. 34, (40-36E), Orient dist. Elev: 2,100 to 2,175 ft. Access: About 2 mi. NW. of Rockcut by road. Prop: 5 patented claims. Owner: Carroll Olsen, Orient, Wash. (1950). Ore: Gold, silver, copper, lead, zinc. Ore min: Pyrite, galena, sphalerite. Gangue: Quartz, gypsum. Deposit: Schists, limestone, and quartzite intruded by lamprophyre dikes are traversed by a shear zone 35 ft. wide filled with brecciated country rock, gouge, quartz, and ore. Dev: 2 adits, one comprising 500 ft. of workings, the other 250 ft. of workings. Assays: Total value of the ore in Au, Ag, Cu, and Pb only \$3 to \$15 per ton. Prod: No large shipments reported. Ref: 7, pp. 202-203. 98, 1918, p. 105. 158.

Jim Blaine Fraction (56)

Loc: Sec. 12, (36-32E), Republic dist. Owner: Blaine-Republic Co. (1932). Anaconda Gold Mining & Reduction Co. (1914). Alliance Mining Co. (1918-1926). Ore: Gold, silver. Ref: 98, 1920, p. 1477. 112, p. 164.

Juliet (113)

(see under lead)

Juno (66)

(see under silver)

Kangaroo (29)

Loc: Sec. 34, (37-32E), Republic dist. Owner: Zwang, Ivan and Co. (1933). Ore: Gold, silver. Ref: 106, 4/6/33.

Kentucky Bell (93)

(see under lead)

Keystone (114)

(see under silver)

King Richard

(see Meadow Creek under copper)

King Solomon (131)

(see under lead)

Klepinger

Loc: Republic dist. Ore: Gold. Prod: 1939. Ref: 97, 1940, p. 477.

Knob Hill (30)

(see also Mountain Lion, Rebate)

Loc. W1/2SE1/4 sec. 27, (37-32E), at head of Eureka Gulch. Elev: 2,700 ft. Access: About 21/2 mi. by road from railroad at Republic. Prop: 13 patented claims, including Knob Hill, Mud Lake, Alpine, Lone Hand, Rebate, Mountain Lion. Owner: Knob Hill Mines, Inc., San Francisco, Calif. (1936----). Knob Hill Mining Co. (1910-1924). Balaklala Consolidated Copper Co. (1925). Balaklala Central Mining & Smelting Co. (1935). Mountain City Copper Co. (1935-1936). Ore: Gold, silver. Ore min: Free gold, electrum, tellurides, pyrite, arsenopyrite, chalcopyrite, stibnite, realgar, marcasite, tetrahedrite, polybasite. pyrargyrite, argentite, umangite, naumannite. Gangue: Quartz. chalcedony, adularia, sericite, calcite, barite, graphite. Deposit: 4 parallel veins and a cross vein with mining widths of 5 to 15 ft. (1952). Dev: A 2-hoisting-compartment inclined 1,200ft. shaft with 9 levels at 110-ft. vertical intervals. Abandoned open pits. Improv: 400-ton flotation-cyanidation mill, camp and office buildings (1955). Assays: 7,192 tons of ore av. 1.5 oz. Au, 4.5 oz. Ag. Prod: More than \$10,000,000 by end of 1951. Produced 1937-1955. Ref: 7, p. 164. 28, pp. 57-61. 31. 43. 11/53, pp. 96-99. 63, p. 109. 97, 1910-1925, 1931, 1934-1952. 98, 1918-1925. 104, 8/15/35, p. 26; 10/30/35, p. 25; 1/30/36, p. 21; 11/30/36, p. 29. 107, 12/39, p. 10; 1/40; 8/41, pp. 29-31. 112, p. 187. 113, 10/15/36, p. 11. 129, pp. 175-180. 133, p. 36, 141, pp. 22, 34. 158. 159, p. 130. 173, pp. 51-63. 174, pp. 264-282.

La Fleur

(see Walla Walla under copper)

Lakeview Fraction (94)

(see under lead)

Lame Foot (Valley)

(see Valley)

Lamefoot

(see under iron)

Lancaster (7)

(see under copper)

Last Chance (159)

(see under copper)

Last Chance (46)

(see also Day Mines)

Loc: W½NW¼ sec. 35, (37-32E), on E. side of Eureka Gulch. Access: 1 mi. NW. of Republic by road. Prop: 1 claim: Last Chance. Owner: Day Mines, Inc., Wallace Idaho (1951—). Lone Pine Surprise Consolidated Mining Co. (1918-1935). Aurum Mining Co. (1950). Ore: Gold, silver. Ore min: Free gold, tetrahedrite, pyrite. Gangue: Quartz, calcite. Deposit: Vein in andesite flow breccia av. 8 ft. in width. Vein filling consists of chalcedonic banded quartz, calcite, and fragments of country rock. Ore is largely removed above the 500-ft. level. Dev: 2-compartment vertical shaft 690 ft. deep, from which 1,200 ft. of drifts and crosscuts have been driven. Also extensive stoping. Assays: 24,000 tons of ore av. about \$13.00 per ton. Ratio of precious metals av. 7.85 oz. Ag to 1 oz. Au.

Prod: \$3,000,000 by the end of 1923. 1940. **Ref:** 97, 1914, 1915, 1918, 1919, 1922-1924, 1928, 1931, 1934, 1935. 98, 1918-1926. **104**, 10/30/35, p. 25. **112**, p. 189. **129**, pp. 182-184. **158**.

Laura S. (125) (see under lead)

Little Cove (31)

(see also Day Mines)

Loc: NE¼ sec. 34, (37-32E). Adjoins the Pearl on the N., Republic dist. Access: Road. Prop: 1 claim. Owner: Day Mines, Inc., Wallace, Idaho (1951——). Little Cove Mining Co. (1918-1924). Aurum Mining Co. (1950). Ore: Gold, silver. Gangue: Chalcedonic quartz, calcite. Prod: 2 carloads valued at \$1,450 prior to 1934. Produced 1934, 1939-1940. Ref: 58, p. 39. 97, 1935, p. 352. 98, 1922, p. 1653; 1925, p. 1822. 112, p. 189. 158.

Little Jay (95)

(see under lead)

Little Tom

(see Juliet under lead)

Lone Pine (32)

(see also Day Mines)

Lec: E½NE¼ sec. 34, (37-32E), on E. side of Eureka Gulch. Access: 1 mi. NW. of Republic by road. Prop: 1 claim: Lone Pine. Owner: Day Mines, Inc., Wallace, Idaho (1951---). Syndicated Deep Mines (1907-1908). Western Union Mines Co. (1914-1915). West Virginia Mining Co. (1915-1918). Republic Consolidated Mines Corp. (1915-1922). Northport Smelting & Refining Co. (1916-1926). Surprise Mining Co. (1924-1926). Aurum Mining Co. (1935-1950). Ore: Gold, silver. Gangue: Quartz, calcite. Deposit: 5 veins in propylitic andesite are from 2 to 14 ft. wide and consist of chalcedonic quartz traversed by narrow black crenulated ribbons. Most of the ore above the 500-ft. level stoped out. Dev: More than 2,500 lineal ft. of underground workings, principally on 2 adits and a shaft. Assays: Ore av. \$10 to \$15 per ton. Prod: \$137,000 to 1910, 1935. Ref: 7, pp. 160-162. 33, 1908, p. 1294. 63, p. 109. 77, vol. 19, p. 93. 88, pp. 19-20. 97, 1910-1922, 1935. 98, 1918-1926. 104, 10/30/35, p. 25; 2/29/36, p. 27. 112, p. 211. 116, no. 11, 1907, p. 27; no. 12, 1907, p. 15; no. 5, 1908, p. 117; no. 6, 1908, p. 139. 129, pp. 185, 187. 141, p. 22. 153, pp. 59-63.

Lone Star and Washington (1)

(see under copper)

Longstreet (96)

(see under silver)

Lucile Dreyfus

(see Morning Star)

Mammoth (47)

Loc: SW1/4 sec. 26, (37-32E), Republic dist. Owner: Little Cove Mining Co. (1918-1924). Ore: Gold, silver. Ref: 98, 1922, p. 1653; 1925, p. 1822. 112, p. 189.

Manila (157)

(see under copper)

Mayflower (132)

(see under lead)

Meadow Creek (146)

(see under copper)

Meteor (115)

(see under silver)

Midnight

(see under silver)

Mineral Hill

(see Morning Star)

Montana (116)

(see under silver)

Morning

Loc: Republic dist. Ore: Gold, silver. Prod: 1934. Ref: 97, 1935, p. 352.

Morning Glory (Old Gold) (33)

Loc: S½SW¼ sec. 34, (37-32E), on Flag Hill. Elev: 3,000 ft. Access: ½ mi. by road from railroad near Republic. Prop: 1 patented claim and a fraction. Owner: C. E. Grove, R. R. Pence, R. M. Skidmore, Spokane, Wash. (1941). Morning Glory Mining Co. (1910-1915). Ore: Gold, silver. Ore min: Gold, pyrite, tellurides. Gangue: Quartz, calcite. Deposit: Vein of drusy banded quartz from a few inches to 2 or 3 ft. wide in quartz latite porphyry. Several rich pay shoots have been mined. Dev: Adit and air shaft with drifts said to aggregate 1,700 ft. Assays: Ore shipped carried values up to \$400 Au, Ag, mostly Au. Tellurium is reported. Prod: \$100,000 to 1936, 1937-1939. Ref: 7, p. 165. 28, pp. 97-101. 88, p. 21. 97, 1914-1916, 1932-1935, 1938-1940. 153, p. 52. 158.

Morning Star (Lucile Dreyfus, Faithful Surprise, Mineral Hill, Virginia) (3)

(see also Surprise)

Loc: SW1/4 sec. 16, (40-34E). Elev: 2,300 ft. Access: 3 mi. by road S. of Danville on E. side of Kettle R. Railroad crosses property. Prop: 10 claims, 9 of which are patented: Mondamin, Tycoon, Minnehaha, Morning Star, Copper Bullion, Old Virginia, Alabama, Alabama Fraction, Copper Lady. Owner: Morning Star Mining Co. (1936---). Lucile Dreyfus Mining Co. (1908-1916). Mineral Hill Tunnel & Copper Mining Co. (1908-1918). Kettle River Mining & Lumber Co. (1918). Virginia Mining Co. (1918-1922). Chatterboy Mining Co. (1920-1926). Ore: Gold, silver, copper. Ore min: Free gold, pyrite, scheelite, chalcopyrite, pyrrhotite. Deposit: Quartz vein cutting serpentine is said to av. 2 ft. in width. Dev: 3,000-ft. haulage adit, 2 shafts 220 and 325 ft. Total workings 12,000 ft. Assays: Av. 0.66 oz. Au, 1 oz. Ag, 2% Cu. Prod: \$15,000 to 1910, \$27,000 in 1917, about \$15,000 in 1935. Produced 1936-1939, 790 tons 1940-1943. Ref: 7, p. 200. 28, pp. 82-86. 33, 1908, p. 892. 37, pp. 25-26. 97, 1913, 1916-1919, 1921, 1930, 1937-1941. 98, 1920-1926. 104, 10/30/36, p. 32. 112, pp. 186, 191, 208. 113, 10/15/36, p. 11; 2/18/37, p. 8. 129, p. 202. 158.

Mount Tolman (150)

(see under copper)

Mountain Boy

Loc: Republic dist. Ore: Gold. Ref: 63, p. 109.

Mountain Lion (34)

(see also Knob Hill)

Loc: W½ sec. 27, (37-32E), on E. side of the N. Fk. of Granite Cr. Elev: 3,000 ft. Access: 3 mi. NW. of Republic by road. Prop: 2 claims: Mountain Lion, Willamette. Owner: Knob Hill Mines, Inc., Republic, Wash. (1938——). Mountain Lion Gold Mining Co. (1898-1915). Mountain Lion Consolidated Co. (1934-1938). Ore: Gold, silver. Ore min: Gold, pyrite. Deposit: 3 parallel veins of banded quartz in andesite flow breccia. Productive vein is 10 to 12 ft. wide. Dev: 1,260-ft. adit and 700-ft. vertical shaft. Open pit mining methods began in 1941. Assays: Smelter assays of ore in 1904 and 1905 show \$5 Au, 2 oz. Ag. Prod: \$200,000 to 1910, 1936-1938. Production after 1938 is included with Knob Hill mine. Ref: 7, pp. 164-165. 43, vol. 68, pp. 725-726. 88, p. 18. 97, 1916, 1932-1949. 104, 1/30/33, p. 19; 4/15/34; 11/30/34, p. 23; 1/30/37, p. 28. 106,

9/15/32. **113**, 10/15/36, p. 11. **133**, p. 36. **153**, pp. 63-64. **158**. **159**, p. 130.

Muldoon

Loc: E. of Malo, Belcher dist. Ore: Gold, silver, copper. Prod: 1914. Ref: 97, 1914, p. 649.

New York (117)

(see under lead)

North San Poil Fraction (35)

Loc: Sec. 34, (37-32E), Republic dist. Owner: San Poil Consolidated Mining Co. (1910-1918). Ore: Gold, silver. Prod: 1911. Ref: 97, 1911, p. 786. 112, p. 201. 114, no. 5, 1909, p. 68.

Northern Light (81)

(see under silver)

Number Seven

(see under silver)

Old Gold

(see Morning Glory)

Old Hickory (57)

Loc: NE¼ sec. 12, (36-32E), Republic dist. Ore: Gold. Prod: 1918, 1931. Ref: 97, 1918, p. 505; 1931, p. 476.

Old Nell (97)

(see under antimony)

Ophir (151)

(see under lead)

Oregon

(see Illinois under copper)

Orion (82)

(see under silver)

Oversight (15)

(see under iron)

Pacific Mutual

(see Addison under copper)

Panama (8)

Loc: Near N. ¼ cor. sec. 6, (39-34E), Curlew area. Owner: Boston-New York Mines Co. (1924-1926). Phoenix Gold & Copper Mining & Milling Co. (1911-1918). National Lead-Silver Co. (1918-1922). Ore: Gold, silver, copper, lead, zinc. Assays: 22 samples showed nil to 4.6% Cu, 0.25 to 7.12 oz. Au, 1.22 to 89.7 oz. Ag. The av. was 1.71% Cu, 0.98 oz. Au, 24.80 oz. Ag. Ref: 98, 1918-1925. 116, no. 2, 1911, pp. 40-41.

Patterson

(see Jennie)

Paul and Brimstone

Loc: Republic dist. Ore: Gold, silver, copper. Ref: 63, p. 109.

Pearl (36)

(see also Day Mines)

Loc: Near center NE¼ sec. 34, (37-32E), adjoining Surprise claim on the N. Access: 1 mi. NW. of Republic by road. Prop: 1 claim. Owner: Day Mines, Inc., Wallace, Idaho (1951——). Syndicated Deep Mines (1907-1908). Pearl Consolidated Mining Co. (1909-1918). Republic Mines Corp. (1910-1912). Western Union Mines Co. (1914-1915). West Virginia Mining Co. (1915-1918). Republic Consolidated Mines Corp. (1915-1922). Northport Smelting & Refining Co. (1916-1926). Surprise Mining Co. (1924-1926). Aurum Mining Co. (1949-1951). Ore: Gold, silver. Gangue: Quartz. Deposit: 12-ft. vein (Surprise) continues through the claim its entire length of 1,500 ft. Wall rock is propylitic quartz latite porphyry. Dev: Diamond drilling. Assays: Said to assay \$4.60 per ton. Prod: 1909-1922. Ref: 7,

p. 159. 33, 1908, p. 1294. 97, 1909-1922. 98, 1918-1926. 112, p. 211. 113, 12/15/36, p. 11. 116, no. 11, 1907, p. 27; no. 12, 1907, p. 15; no. 5, 1908, p. 117; no. 6, 1908, p. 139. 129, pp. 185, 188. 158.

Perry (98)

Loc: Sec. 36, (32-36E), Covada dist. Ore: Gold, silver. Ref: 58, p. 53.

Pilgrim (133)

(see under lead)

Pin Money (16)

(see also Oversight under iron)

Loc: Near center E½ sec. 18, (37-34E), Belcher dist. Elev: 4,800 ft. Access: 13 mi. by road NE. of Republic. Prop: 1 claim of the Oversight group. Owner: Oversight Mining & Milling Co. (1906-1918.) Ore: Gold, silver, copper, nickel, cobalt. Ore min: Arsenopyrite, pyrrhotite, pyrite, tetrahedrite, smaltite (?). Deposit: Quartz vein with 6-in. av. width has hanging wall of impure limestone and footwall of slate or phyllite. Dev: 80-ft. inclined shaft. Ref: 7, p. 173. 33, 1907, p. 904. 98, 1918, p. 118. 105, 1906, p. 313; 1907, p. 264. 116, no. 2, 1908, p. 30; no. 5, 1908, p. 117. 141, p. 62.

Plymouth Rock (134)

(see under lead)

Polaris (99)

(see under lead)

Princess Maude (Southern Republic) (58)

Loc: Near center sec. 12, (36-32E), near base of the E. slope of Copper Mtn. Access: 1 mi. SW. of Republic by road. Prop: 1 claim. Owner: Blaine-Republic Co. (1932). Southern Republic Mining Co. (1910). Anaconda Gold Mining & Reduction Co. (1914). Alliance Mining Co. (1915-1926). Ore: Gold, silver. Ore min: Pyrite. Gangue: Quartz, calcite, laumontite. Deposit: 2- to 4-ft. vein in propylitic andesite. Vein consists of vitreous white quartz showing lines of crustification parallel to the walls. Dev: 70-ft. incline and 200-ft. adit from which a 200-ft. and a 300-ft. drift have been driven. Assays: Ore shipped said to av. \$25 per ton. Prod: Has produced. Ref: 7, pp. 153-154. 88, pp. 21-22. 98, 1918-1926. 106, 7/21/32, p. 7. 112, pp. 164, 166. 114, no. 5, 1909. 153, pp. 52-53.

Quilp (Imperator, Eureka) (48)

(see also Day Mines)

Loc: Near W. line $SW\frac{1}{4}$ sec. 35, (37-32E), on E. side of Eureka Gulch. Elev. 2,800 ft. Access: 1 mi. NW. of Republic by road. Prop: 1 patented claim: Quilp, originally located as the San Poil. Owner: Day Mines, Inc., Wallace, Idaho (1951----). Imperator Quilp Mining Co. (1909-1912). Quilp Gold Mining Co. (1915-1941). Eureka Mining & Milling Co. (1936). Aurum Mining Co. (1943-1951). Ore: Gold, silver. Ore min: Gold, pyrite, chalcopyrite, native silver. Deposit: Vein of chalcedonic banded quartz 7 to 8 ft. wide cuts propylitic andesite. Dev: 400-ft. shaft with several drifts and stopes. Winze sunk from 400-ft. to 500-ft. level. Assays: 20,000 tons of ore in 1906 had av. assay of 0.4 oz. Au, 5 oz. Ag. Av. assay on shipments in 1909 was 0.5 oz. Au, 4 oz. Ag. Prod: Total \$720,938.70 to end of 1920; 1936; 22,402 tons 1937; 9,828 tons 1938; 1939-1940. Ref: 7, pp. 157-158. 28, pp. 107-111. 88, p. 19. 97, 1909-1914, 1918-1920, 1922-1924, 1927, 1937-1940, 98, 1918-1926. 104, 6/30/36, p. 22; 11/20/36, p. 29; 12/15/36, pp. 26-27. 112, p. 198. 113, 10/15/36, p. 11. 114, no. 5, 1909. 129, pp. 180-182. 141, pp. 20, 22, 34. 153, pp. 53-54. 158. 159, p. 130.

Railroad (5)

(see under copper)

Rattler (75)

(see under silver)

Rattlesnake (83)

(see under lead)

Rebate (18)

(see also Knob Hill)

Loc: NE¼ sec. 22, (37-32E), Republic dist. Owner: Knob Hill Mines, Inc. (1943——). Rebate Mining Co. (1918). Ore: Gold, silver. Ref: 68, p. 11. 112, p. 199.

Red Chief (118)

(see under lead)

Reliance (100)

(see under silver)

Relief (104)

Loc: $SE\frac{1}{4}$ sec. 15, (32-37E), Republic dist. Owner: Rebate Mining Co. (1918). Ore: Gold. Ref: 112, p. 199.

Ren Rice (76)

(see under lead)

Republic (Blaine Republic) (59)

Loc: NE1/4 sec. 12, (36-32E). Elev: 3,300 to 3,900 ft. Access: 1/2 mi. SW. of Republic by road. Prop: 13 patented claims. Owner: Day Mines, Inc., Wallace, Idaho (1951-). Republic Gold Mining & Milling Co. (1898). Republic Consolidated Gold Mining Co. (1902). New Republic Co. (1909). Rathfon Reduction Works (1914-1926). Blaine-Republic Co. (1932-1936). Eureka Mining & Milling Co. (1937-1940). Aurum Mining Co. (1950). Ore: Gold, silver, selenium. Ore min: Pyrite, free gold. Gangue: Quartz, calcite. Deposit: Vein as much as 8 or 10 ft. wide, but av. 2 or 3 ft. Vein is composed principally of chalcedonic quartz. Concentrically crustified. Crustifications marked by dark crenulated bands. Dev: About 2 mi. of adits, drifts, winzes, raises, and crosscuts. Assays: Some hand picked ore assays \$100, but most av. 0.14 oz. Au, 0.56 oz. Ag. Prod: Est. at \$1,400,000 to 1910; 2,757 tons of ore to smelter 1937; shipped 1933-1946. Ref: 1-A, 1900, p. 419. 7, pp. 154-157. 28, pp. 87-91. 43, vol. 68, pp. 725-726. 76. 88, pp. 1618. 97, 1908-1918, 1921-1924, 1929, 1931, 1934, 1935, 1938-1941. 98, 1918-1926. 99, 11/27/34. 104, 4/30/34; 6/30/36, p. 22; 12/15/36, pp. 26-27. 106, 7/21/32, p. 7; 11/3/32, p. 9; 9/7/33; 10/5/33. 112, pp. 164, 166, 198. 113, 10/15/36, p. 11. 141, p. 22. 153, pp. 44-50. 158. 159, p. 130.

Reserve (107)

(see under silver)

Robert E. Lee (101)

(see under antimony)

Romulus (119)

(see under lead)

Rosario (84)

Loc: Sec. 31, (32-37E) and sec. 36, (32-36E), Covada dist. Access: 28 mi. by road to railroad at Kettle Falls. Prop: 2 unpatented claims. Owner: F. V. Messenger, Inchelium, Wash. (1941). Ore: Gold, silver. Deposit: Crushed and mineralized country rock. Dev: 300-ft. adit, 50-ft. adit. Ref: 158, 163, p. 81.

Rover Bonanza (152)

(see under silver)

Royal Ann (102)

(see under lead)

Ruby (109)

Loc: Near NE. cor. sec. 5, (31-36E), Covada dist. Prop: 1 claim. Owner: L. G. Curry (1912). Ore: Gold (?) Ore min: Pyrite. Dev: 12-ft. shaft. Ref: 122, p. 156. 163, p. 76.

St. Patrick (120)

(see under lead)

St. Paul (77)

(see under silver)

San Poil (37)

(see also Day Mines)

Loc: $SW^{1}/4NE^{1}/4$ sec. 34, (37-32E), Republic dist., on W. side of Eureka Gulch. Access: 1 mi. by road from Republic. Prop: 1 claim, S. of the Ben Hur. Owner: Day Mines, Inc., Wallace, Idaho (1951----). San Poil Consolidated Mining Co. (1910-1918). Western Union Mines Co. (1914-1915). West Hill Mining Co. (1915-1922). Western Silica & Sand Co. (1918). Trail Mining & Smelting Co. (1919). Zwang, Ivan and Co. (1933). Aurum Mining Co. (1950). Ore: Gold, silver. Deposit: Latite porphyry cut by a quartz-calcite vein thought to be the southward extension of the Ben Hur vein. Vein is cut by several faults. Ore in lenses up to 8 ft. thick. Dev: 2,500 ft. of adits which expose the vein for 1,000 ft. Assays: Some of the ore shipped av. 0.7 oz. Au, 4 oz. Ag. Prod: 1909-1921, 1931, 1935. 200 tons prior to 1902. Ref: 7, pp. 162-163. 33, 1908, p. 1215. 97, 1910-1921, 1931, 1935. 98, 1918-1925. 104, 12/15/34, p. 24. 106, 11/5/31; 4/6/33. 112, p. 201. 129, p. 188. 153, pp. 62-63. 158. 159, p. 130.

San Poil Fraction (38)

Loc: NE¼ sec. 34, (37-32E), Republic dist. Owner: Zwang, Ivan and Co. (1933). Ore: Gold, silver. Ref: 106, 4/6/33.

San Poil Monitor

(see Meadow Creek under copper)

Santa Claus (108)

Loc: $S\frac{1}{2}$ sec. 32, (32-36E), Covada dist. Prop. 1 claim. Ore: Gold (?). Ore min: Pyrite. Deposit: 3-ft. quartz vein. Dev: 40-ft. shaft. Ref: 122, p. 156. 163, p. 76.

Schminski (164)

(see under molybdenum)

Seattle (39)

Loc: W½NW¼ sec. 34, (37-32E), Republic dist. Prop: 1 patented claim: Seattle. Owner: J. A. Wiseman, Republic, Wash. (1939). Ore: Gold, silver. Dev: 60-ft. shaft. Prod: 1938, 1939. Ref: 58, p. 61. 97, 1939, p. 490; 1940, p. 477. 158.

Several (121)

(see under lead)

Shamrock (144)

(see under nickel)

Shonee

(see under copper)

Silver Bell (85)

(see under lead)

Silver Crown

(see under silver)

Silver Crown No. 2 (135)

(see under silver)

Silver Crown No. 3 (136)

(see under lead)

Silver Hill (156)

(see under copper)

Silver Pick

(see under silver)

Silver Spar (122)

Loc: NE. cor. sec. 27, (32-36E), Covada dist. Ore: Gold (?). Ore min: Pyrite. Gangue: Calcite. Deposit: A 1-ft. vein in

granodiorite composed mainly of coarse calcite. Sparse disseminations of pyrite and finely divided unidentified sulfide. **Dev:** 15-ft. shaft and several pits distributed along a length of 200 ft. **Ref:** 122, p. 159.

Silver Tip (67)

(see under silver)

Snowstorm (40)

Loc: NE¼ sec. 34, (37-32E), Republic dist. Owner: Zwang, Ivan and Co. (1933). Ore: Gold, silver. Ref: 106, 4/6/33.

Snowstorm (White Swan) (123)

(see under lead)

South Penn (19)

(see also Day Mines)

Loc: Sec. 22, (37-32E), Republic dist. Owner: Day Mines, Inc., Wallace, Idaho (1951——). C. Trevitt and E. Pierce, Republic, Wash., leasing from Aurum Mining Co. (1949). Ore: Gold, silver. Gangue: Quartz. Assays: 1945 production of 172 tons yielded \$2,168. Prod: 1941-1949. Ref: 22, p. 11. 68, p. 16.

Southern Republic

(see Princess Maude)

Standard and Emma (60)

Loc: SE¹/₄ sec. 12, (36-32E), Republic dist. Owner: Alliance Mining Co. (1918-1926). Anaconda Gold Mining & Reduction Co. (1914). Ore: Gold, silver. Ref: 98, 1918-1926. 112, pp. 164, 166.

Stray Dog (124)

(see under silver)

Sunset (137)

(see under lead)

Surprise (4)

(see also Morning Star)

Loc: Near N. line NW¼ sec. 16, (40-34E). Access: 1½ mi. S. of Danville by road on S. side of Lone Ranch Cr. Owner: Morning Star Mining Co., Spokane, Wash. (1936-1952). Faithful Surprise Mining Co. (1915). Ore: Gold. Ore min: Free gold. Deposit: 2-ft. quartz vein in serpentine with some black slate and diorite. Coarse yellow gold in the quartz. Dev: Adit more than 300 ft. long. Assays: Ore shipped av. \$17 per ton. Prod: Has produced. Ref: 7, p. 200.

Surprise (41)

(see also Day Mines)

Loc: E½NE¼SE¼ sec. 34, (37-32E), on E. side of Eureka Gulch. Access: 1 mi. NW. of Republic by road. Lies between Quilp on S. and Pearl on N. Prop: 1 claim. Owner: Day Mines, Inc., Wallace, Idaho (1951---). Syndicated Deep Mines (1907-1908). Republic Mines Corp. (1910-1912). Western Union Mines Co. (1914-1915). West Virginia Mining Co. (1915-1918). Republic Consolidated Mines Corp. (1915-1922). Northport Smelting & Refining Co. (1916-1926). Surprise Mining Co. (1924-1926). Aurum Mining Co. (1950). Ore: Gold, silver. Ore min: Gold, pyrite. Gangue: Quartz. Deposit: 4- to 8-ft. vein in propylitic quartz latite. Vein consists of banded quartz and included fragments of country rock. Dev: 1,100 ft. of drifts and crosscuts (1909). 700-ft. inclined shaft. Assays: 2,400 tons av. \$21.65 per ton. Prod: Over \$1,000,000. 1910-1923, 1934, 1938, 1947-1950. Ref: 7, pp. 159-160. 33, 1908, p. 1294. 43, 1900, p. 617. 68, p. 5. 88, pp. 19-20. 97, 1910-1923, 1934. 98, 1918-1926. 112, p. 211. 114, no. 5, 1909. 116, no. 11, 1907, p. 27; no. 12, 1907, p. 15; no. 5, 1908, p. 117; no. 6, 1908, p. 139. 129, pp. 185, 186. 141, pp. 22, 34. 153, pp. 54-56. 158.

Syracuse (138)

(see under silver)

Tom Thumb (17)

(see also Day Mines)

Loc: S½SE¼ sec. 15, (37-32E), at head of Granite Cr. Elev: 3,200 ft. Access: 4 mi. N. of Republic by road. Prop: 6 patented claims. Owner: Day Mines, Inc., Wallace, Idaho (1951——). New Republic Mining Co. (1908-1910). Midget Gold Mining & Milling Co. (1909-1918). Aurum Mining Co. (1939-1950). Ore: Gold, silver. Deposit: Quartz spread widely through shale. Lodes not well defined. One 8-ft. vein in andesite. Dev: Said to be about 1,600 ft. of underground development, including a 375-ft. shaft. Assays: Ore said to range from \$10 to \$15 per ton, though some shipments yielded \$23 per ton. 8 or 9 oz. Ag per oz. Au. Prod: 1908-1910, 1915, 1916, 1934, 1938. Ref: 7, p. 166. 68, p. 5. 88, p. 19. 97, 1908-1910, 1915, 1916, 1935. 106, 6/4/31. 112, p. 191. 114, no. 5, 1909. 153, pp. 64-65. 158. 159, p. 130.

Trade Dollar (42)

Loc: E½SW¼ sec. 27, (37-32E). Access: About 2 mi. by road NW. of Republic. Prop: 1 claim adjoining Silver Dollar on the S. Owner: Day Mines, Inc., Wallace, Idaho. (1951——). San Poil Consolidated Mining Co. (1910-1918). Curlew Mining Co. (1915). Mountain Lion Consolidated Co. (1934). Aurum Mining Co. (1950). Ore: Gold, silver. Deposit: Quartz vein from 20 in. to 13 ft. wide. Dev: 300-ft. shaft with short drifts on 2 levels. Assays: 1,000 tons of ore av. \$17 per ton with 10 to 12 oz. Ag per ton. Prod: About \$25,000 by 1934. Ref: 7, p. 163. 68, p. 5. 97, 1915, p. 569. 104, 1/30/33, p. 19. 158.

Truax (106)

Loc: SW1/4 sec. 22, (32-36E), 21/2 mi. from Covada post office. Prop. 1 claim. Owner: M. H. O'Connell (1912). Ore: Gold, silver. Deposit: 2 veins in granodiorite. Dev: 143-ft. adit, shaft, open cuts. Ref: 163, p. 77.

U. S. (142)

(see under lead)

Umatilla (162)

(see under copper)

V Fraction (49)

Loc: NE¾ sec. 35, (37-32E), Republic dist. **Owner:** Insurgent Gold Mining Co. (1918-1924). **Ore:** Gold, silver. **Ref:** 98, 1922, p. 1649; 1925, p. 1819. **112**, p. 184.

Valley (Golden Valley, Lame Foot) (10)

Loc: Sec. 6, (37-33E). Access: 5 mi. from Republic by road. Prop: 3 patented claims: Valley, Valley No. 1, Valley No. 2. Owner: I. G. and Everett Hougland, Republic, Wash. (1939——). Ore: Gold, silver, selenium. Ore min: Aurous selenide, pyrite, tetrahedrite. Gangue: Quartz, calcite. Deposit: Vein est. to av. 7 ft. wide and 1,200 ft. in length in andesite. Dev: 400-ft. incline and other workings on 3 levels total 2,500 ft. Assays: Typical assay shows 0.28 oz. Au, 1.0 oz. Ag. Analysis shows 0.0027% to 0.0061% Se. Prod: 1,994 tons prior to 1941, 5,800 tons 1942, 1,302 tons 1943, 1950. Ref: 28, pp. 77-81. 76. 97, 1940, p. 477; 1941, p. 473. 108, 7/39, p. 22; 2/42, pp. 13-16. 158.

Veda W.

(see under silver)

Victor (71)

(see under silver)

Virginia

(see Morning Star)

Walla Walla (163)

(see under copper)

Walla Walla (La Fleur) (2)

(see under copper)

Washington

(see Lone Star and Washington under copper)

White Horse

(see under silver)

White Swan

(see Snowstorm under lead)

White Tail (103)

(see under lead)

Willmot

(see under copper)

Wilmont Divide

Loc: S. part T. 30 N., R. 35 E., on divide between Ninemile and Wilmont Creeks. Ore: Gold. Deposit: Small veins of ironstained quartz. Dev: Several prospect pits. Assay: Said to assay a few dollars in gold. Ref: 122, p. 140.

Winnipeg (Yaki) (11)

Loc: Sec. 31, (38-34E), about 1 mi. W. of Belcher mine, Belcher dist. Ore: Gold, copper, iron. Ore min: Pyrite, pyrrhotite, magnetite, some chalcopyrite. Deposit: Replacement body in limestone surrounded by granite. Dev: 600-ft. adit connecting with bottom of 200-ft. shaft. Ref: 116, no. 4, 1907, p. 3; no. 5, 1909, p. 72. 157.

Yaki

(see Winnipeg)

Zalla M (9)

(see under silver)

GARFIELD COUNTY

Alberta

Loc: Marshall Lk. dist. near Pomeroy. This appears to be erroneous. Perhaps this refers to Marshall Lk. near Newport, Pend Oreille County. Ore: Gold. Prod: Small amount in 1929. Ref: 97, 1929, p. 425.

GRANT COUNTY

Big Four

(see Electric City under molybdenum)

Black-Rosauer (1)

(see under silver)

Daniels

(see Electric City under molybdenum)

Electric City (2)

(see under molybdenum)

Hope No. 1 (3)

(see under silver)

JEFFERSON COUNTY

Rustler Creek (1)

Loc: On Rustler Cr., in T. 25 N., R. 7 W. Possibly in sec. 31. Access: 1½ mi. by trail, 21½ mi. by road to U. S. 101 at Quinault Lk. Prop: 5 claims. Owner: M. H. and P. A. Mulkey, C. Slough, and M. and V. Oberg. Deposit: Quartz vein in slate. Dev: Open cut. Assays: \$7.00 to \$22.40 Au. Ref: 158.

KING COUNTY

Aaron (13)

Loc: Secs. 29, 30, and 31, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Aces Up (61)

(see under silver)

Anderson (3)

(see under iron)

Annie (78)

(see under copper)

Apex (Bondholders Syndicate) (7)

Loc: SW 1/4 sec. 34, (26-10E), near headwaters of Money Cr., Miller R. dist. Elev: 3,150 ft. Prop: 16 unpatented claims: Apex, Big Dyke, Campbell, Floe, Floe No. 2, Jumbo, Jumbo No. 2, May, Milwaukee, LaPorte No. 2, and others. Owner: Apex Gold Mines, Inc. (1905-1922, 1934-1943). Bondholders Syndicate Mining Co. (1923-1926). National Gold Corp. (1928). Ore: Gold, silver, copper, lead. Ore min: Arsenopyrite, pyrite, chalcopyrite, galena, arsenolite. Deposit: Quartz vein 2 to 6 ft. wide fills a continuous fissure in granodiorite. High-grade ore occurs in narrow streaks in the vein. Dev: Adits on 5 levels total 2,500 lineal ft. Assays: High-grade ore \$20 to \$80 Au. Low-grade \$5 to \$7 Au. 237 tons av. \$41.07 per ton, the values chiefly in Au. Ore and conc. shipped in 1920 av. 21% to 26% As, 18 to 20 oz. Ag. 11/2 to 21/2 oz. Au, 41/2% to 6% Pb. Prod: 300 tons valued at \$80,000 prior to 1901. Produced 1905, 1908, 1910, 1912, 1913, 1916-1920, 1926, 1928, 1936-1943. \$300,000 total. Ref: 24. 33, 1907. 63, p. 39. 88, p. 85. 97, 1905, 1908, 1910, 1912, 1913, 1916-1920, 1923, 1926, 1928, 1938-1941. 98, 1922, 1925, 1926. 99, 1/29/35. 104, 7/15/34, p. 26; 12/30/36, p. 28; 4/30/32, pp. 3-4; 9/30/33, p. 17; 12/15/34, p. 22. 114, no. 6, 1906, p. 79; 1907, pp. 61-62; no. 5, 1909. 116, no. 4, 1908, p. 91. 117, no. 8, 1922, p. 5. 129, pp. 301-305. 130, p. 59. 141, p. 22. 158. 159, p. 135.

Arizona and Washington

Loc: 1 mi. from Mastodon property, Buena Vista dist. Ore: Gold, copper. Ref: 63, p. 43.

Baring

(see Anderson under iron)

Bear Basin (57)

(see under silver)

Bear Creek

(see Robinson)

Beatrice (14)

Loc: Secs. 31 and 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Beaverdale (43)

Loc: Secs. 8 and 9, (25-10E), ½ mi. up Illinois Cr. from N. Fk. of Snoqualmie R. Vein crops out in canyon which enters Illinois Cr. from the W. Elev: 3,000 to 3,720 ft. Access: Trail. Prop: 6 patented claims. Owner: A. S. Ryland, Seattle, Wash. (1947). Ore: Gold. Ore min: Pyrite, arsenopyrite. Gangue: Quartz, gouge. Deposit: Altered and brecciated granodiorite along narrow zone of faulting in which are seams of quartz and sulfides up to 20 in. thick. Dev: 3 adits, one at 3,370 ft. is caved at portal, another at 3,610 ft. is 55 ft. long, and the other at 3,720 ft. follows vein for 140 ft. Assays: Said to run as high as \$161 Au. Ref: 11-A, pp. 210-213. 158.

Belle of Tennessee (44)

Loc: Sec. 8, (25-10E), Buena Vista dist. Ore: Gold, silver. Ref: 58, p. 6. 63, p. 43.

Bergeson (Normandie) (15)

Loc: Sec. 30, (26-11E), Miller R. dist. Elev: 700 ft. above Miller R. Owner: Arthur de Soucy, Norman, Wash. (1941). Bergeson Mining & Smelting Co. (1915-1918). Ore: Gold, silver.

Ore min: Arsenopyrite. Gangue: Quartz. Deposit: Large body of ore. Dev: 1,200-ft. adit. Ref: 58, p. 6. 158.

Big Chief

Loc: Snoqualmie area. Owner: A. O. Larsen, Seattle, Wash. (1938). Ore: Gold, copper. Ref: 104, 7/30/38.

Black Bear (16)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: James Campbell. Ore: Gold. Ref: 158.

Black Jack

Loc: T. 24 N., R. 8 E. Ore: Gold, silver, copper. Ref: 58, p. 7. 63, p. 213.

Bobtail (62)

(see under copper)

Bonanza Queen

Loc: Left bank of Money Cr. Ore: Gold, copper. Ref: 63, p. 39.

Bondholders Syndicate

(see Apex)

Bridal Veil

Loc: Cedar R. dist. Ore: Gold, copper, silver. Ref: 63, p. 48.

Brooklyn (47)

(see under copper)

Carmack (85)

Loc: Secs. 7 and 8, (22-11E), on S. Fk. of Snoqualmie R. near Snoqualmie Pass. Prop: 5 claims. Owner: Carmack Gold & Copper Mining Co. (1902-1918). Ore: Gold, silver, lead, copper. Deposit: 3 veins 12, 2½, and 1 ft. wide. Dev: 375 ft. of tunnel and shafts. Assays: 1 to 1½ oz. Au. Prod: 20 tons shipped prior to 1901. Ref: 33, 1907, p. 447. 88, p. 86. 98, p. 66. 158.

Cascade Gold

Loc: King County. Owner: Cascade Gold Mining & Milling Co. (1890). Ore: Gold. Ref: 105, no. 6, 1890, p. 91.

Charles (17)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Christina

(see under copper)

Clara (18)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Cleopatra (58)

(see under silver)

Cleveland (75)

(see under copper)

Clipper (81)

(see under copper)

Commonwealth (83)

(see under copper)

Coney Basin (48)

Loc: Sec. 13, (25-10E) and sec. 19, (25-11E). Elev: 2,100 to 5,800 ft. Access: 8 mi. up Miller R. from its mouth by road and 2 mi. by trail. Prop. 14 claims: Coney Nos. 1 to 3, Jeanette Nos. 1 to 3, Black Bear, Black Bear Nos. 1 and 2, Jake Nos. 1 and 2, Leona Nos. 1 and 2, Gold Chest, Gold Chest No. 1. Owner: Coney Basin Gold Mines, Inc. leasing to John Whitham, Seattle, Wash. (1950-1952). Ore: Gold, silver, copper, zinc, lead. Ore min: Chalcopyrite, galena, sphalerite, pyrite, tetrahedrite.

Gangue: Quartz. Deposit: Small persistent quartz veinlets along joint planes in granodiorite. Also 1 silicified mineralized zone 4 ft. wide. Dev: 1,650-ft. adit, another shorter adit, and some open cuts total about 3,000 ft. Assays: Av. of 22 samples gave 0.38 oz. Au, 11.97 oz. Ag. 3 other assays showed 0.24% to 1.30% Cu, 2.6% to 6.9% Pb, 2.9% to 9.1% Zn. 8 tons shipped to smelter in 1941 had 0.86 oz. Au, 19.71 oz. Ag, 0.82% Cu, 6.0% Pb, 6.0% Zn, 1.52% As, 0.26% Sb. Prod: 40 tons in 1895, produced in 1934, 1937-1939, 1941. Ref: 46, pp. 159-160. 63, p. 36. 97, 1935, 1936, 1939, 1940. 104, 9/31/34, p. 22; 6/15/35, p. 28. 114, no. 5, 1909. 132, p. 87. 147, pp. 154-185. 158. 159, p. 135.

Cooper (19)

Loc: Secs. 31 and 32, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Copper Bell

Loc: $2\frac{1}{2}$ mi. from Sallal Prairie. Ore: Gold, silver, copper. Ref: 63, p. 42.

Copper Chief (82)

(see under copper)

Copper Duke (8)

Loc: Sec. 25, (26-10E), on Money Cr. Ore: Gold, silver, copper. Ref: 158.

Copper Plate

(see Seattle-Cascade under silver)

Damon and Pythias (6)

Loc: Sec. 33, (26-10E), at head of Money Cr., adjoining Apex property. Elev: 3,000 ft. Access: 1 mi. from end of Apex road, by which it is 6 mi. to railroad at Miller R. Prop: 18 unpatented claims. Owner: W. J. Priestley, Skykomish, Wash. (1939-1944). National Gold Corp. (1928-1932). Ore: Gold, silver, lead. Ore min: Arsenopyrite, pyrite, chalcopyrite, galena. Gangue: Quartz. Deposit: 2 veins, one of which is said to av. 3 ft. in width over distance of more than 900 ft. in granodiorite. Dev: 3,000 ft. of crosscut and drifts expose the veins for about 1,500 ft. of length and from 800 to 1,400 ft. of depth. Improv. Cookhouse and bunkhouse, 2,300 ft. of track. Assays: 23 tons shipped said to run 0.87 oz. Au, 9 oz. Ag, 4% Pb. Mine-run ore said to carry 7.86% As, 0.245 oz. Au, 2.2 oz. Ag. Prod: 23-ton shipment reported prior to 1940. Ref: 63, p. 39. 97, 1928, p. 700. 104, 4/30/32, pp. 3-4. 106, 9/17/28, pp. 29-30; 5/1/30, p. 20. 157. 158.

Dawson (52)

(see under lead)

De La Mar (20)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Della Jane (87)

Loc: Sec. 5, (22-9E), on Profile Mtn., Snoqualmie dist. Ore: Gold. Ref: 58, p. 18. 63, p. 42.

Dudley (21)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Dutch Miller (80)

(see under copper)

Eureka (94)

(see under copper)

Eureka

(see under copper)

Extra (22)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ore min: Arsenopyrite. Deposit: Porphyritic dike heavily mineralized with arsenopyrite. Ref: 158.

Favorite Gulch (9)

Loc: Sec. 25, (26-10E), on Money Cr. Ore: Gold, silver. Ref: 158.

Fletcher Webster

Loc: 1 mi. above the mouth of the middle prong of N. Fk. of Snoqualmie R., Buena Vista dist. Ore: Gold, silver. Ref: 63, p. 43

Florence (23)

Loc: Sec. 31, (26-11E), Money Cr. dist Prop: 1 patented claim. Owner: Lake Valley Stone & Shingle Co. Ore: Gold. Ref: 158.

Foss River (63)

(see under copper)

Goat Mountain (71)

(see under lead)

Gold Mountain (24)

(see under silver)

Golden Tunnel (5)

(see under copper)

Grand Central (64)

(see under antimony)

Great Republic (38)

(see under antimony)

Guye (84)

(see under iron)

Happy Thought

(see Great Republic under antimony)

Hawkeye

Loc: Miller R. dist. Ore: Gold, silver, copper, lead. Ref: 63, p. 38.

Highlander (69)

Loc: $SE\frac{1}{4}$ sec. 25, (25-10E), Miller R. dist. Ore: Gold. Ref: 63, pp. 37-38.

Jack Pot (70)

(see under zinc)

Jay (25)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Joamco (40)

(see under copper)

John Stevens

(see Una under copper)

Judge (26)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Kimball (27)

Loc: Secs. 31 and 32, (26-11E) and secs. 5 and 6, (25-11E), on Kimball Cr. 2 mi. from Money Cr. Access: Trail. Prop: 29 patented claims. Owner: A. F. Brennan, Seattle, Wash. (1939). Kimball Creek Mining Co. (1903). Ore: Gold, silver, antimony. Deposit: Sparsely mineralized porphyry dike 200 ft. wide cuts granodiorite. Dev: 750-ft. adit. Ref: 58, p. 37. 158.

King and Kinney (53)

(see under copper)

Kinney

(see King and Kinney under copper)

Klondike (86)

Loc: Secs. 7 and 8, (22-11E). Ore: Gold. Ref: 158.

Last Chance (88)

Loc: Sec. 11, (22-9E), Snoqualmie dist. Ore: Gold, silver. Ref: 58, p. 38. 63, p. 42.

Last Chance (90)

Loc: SE1/4 sec. 15, (22-10E), Cedar R. dist. Ore: Gold, copper. Ref: 63, p. 48.

Last Chance (Sockless Jerry) (49)

Loc: Sec. 1, (25-10E), 1 mi. S. of Money Cr. Access: Trail. Owner: John Maloney, Skykomish, Wash. (1941). Ore: Gold, silver, lead, zinc, antimony. Ore min: Arsenopyrite, pyrite. Dev: 100-ft. drift. Ref: 58, p. 38. 63, p. 39. 158.

Laura Lindsay

Loc: Snoqualmie area. Ore: Gold, silver. Ref: 58, p. 39. 63, p. 42.

Legal Tender (76)

Loc: SE $\frac{1}{4}$ sec. 25, (24-8E), Snoqualmie dist. **Ore:** Gold, copper. **Ref:** 63, p. 42.

Lennox (51)

Loc: Secs. 7 and 18, (25-10E) and sec. 13, (25-9E), Buena Vista dist. Elev: 1,830 to 2,870 ft. Access: 23 mi. by road from railroad at North Bend. Prop: 45 claims held by possessory title. Owner: Priestley Mining & Milling Co. (1940—), leasing from Lennox Mining & Development Co., Seattle, Wash. Ore: Gold, silver, zinc, lead, copper, arsenic, antimony. Ore min: Sphalerite, chalcopyrite, pyrite, arsenopyrite, galena. Gangue: Quartz, calcite. Deposit: Shear zones in granodiorite are persistent to depths and lengths of several hundred feet, but mineralization is irregular. Dev: 5 adits and 2 open cuts. Lower crosscut 670 ft. long. 3 diamond drill holes totaling 1,240 ft., 120-ft. drift, 20-ft. drift. Improv: 4 bunkhouses, mess hall, sawmill, 2 machine shops, a pelton water wheel, and an 80-KW. generator (1950). Assays: A 1-ton lot of picked ore (1938): 1.14 oz. Au, 10.42 oz. Ag, 1.5% Cu, 1.2% Pb, 8.3% Zn, 6.18% As, 0.67% Sb. 8 samples assayed in 1947 ranged from \$7.51 to \$63.91 Au, Ag, Pb, Zn, Cu. Prod: 1-ton test shipment in 1947. Ref: 11-A, pp. 213-222. 133, p. 38. 157. 158.

Le Roi (66)

Loc: SW $\frac{1}{4}$ sec. 30, (25-11E), Miller R. dist. **Ore:** Gold, silver, copper. **Ref:** 63, p. 38.

Leta (77)

Loc: SE $\frac{1}{4}$ sec. 26, (24-8E), Snoqualmie dist. Ore: Gold, silver, copper. Ref: 63, p. 42.

Lillian Leone (28)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Little Una

Loc: Adjoining Lone Star, Miller R. dist. Ore: Gold, copper. Ref: 63, p. 38.

Lone Star (50)

Loc: Sec. 1, (25-10E), on Money Cr. Claims cross Falls Cr. Ore: Gold, silver, lead. Ref: 63, p. 38. 158.

Lost Lode (72)

(see under molybdenum)

Lucky Strike (45)

Loc: Secs. 9 and 10, (25-10E), Buena Vista dist. Elev: 3,000 to 4,000 ft. Access: 2-mi. trail from N. Fk. road about 3½ mi. above mouth of Lennox R. Prop: 3 unpatented claims. Owner: George and Gary Rutherford, Seattle, Wash. (1947-1951). Ore: Gold, silver, copper. Ore min: Pyrite, arsenopyrite, chalcopyrite. Gangue: Quartz. Deposit: Said to be an 8-ft. ledge traceable for 500 ft. 2 parallel faults about 6 ft. apart in granodiorite containing quartz-sulfide seams as much as 12 in. thick. Dev: 30-ft. shaft. Assays: Reportedly assays \$20 to \$30 Au, Ag, Cu. Ref: 11-A, pp. 207-210. 158.

Mastodon

(see under silver)

May Earhart

(see Robinson)

Metropolitan (67)

Loc: On W. side of Miller R. 9 mi. from its mouth. Adjoins Cleopatra property in sec. 30, (25-11E). Ore: Gold, silver. Deposit: 16-ft. mineralized zone. Ref: 88, p. 84.

Mitchell (29)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Mona

(see Mono under copper)

Monarch (10)

Loc: Sec. 25, (26-10E), on Money Cr. Ore: Gold, silver. Ref: 158.

Mono (39)

(see under copper)

Monte Carlo (46)

Loc: NW¹/₄ sec. 4, (25-10E), near head of N. Fk. of Snoqualmie R. Elev: 3,440 ft. Access: 4 mi. by trail from road at Lennox camp. Prop: 13 unpatented claims. Owner: E. P. Courtney and Morton Van Nuys, Seattle, Wash. (1947). Ore: Gold, silver. Ore min: Pyrite, malachite, arsenopyrite, molybdenite. Gangue: Quartz, tourmaline. Deposit: Quartz vein along a shear zone in granite varies from 1 to 20 in. wide. Dev: 340-ft. drift and a crosscut. 2 other adits reported. Improv: Cabin (1947). Assays: Said to assay \$25 to \$55 Au, Ag. Ref: 58, p. 45. 158.

Mt. Logan

(see Guye under iron)

Mount Phelps (41)

(see under zinc)

Mountain Gem

Loc: Cleopatra Basin, Miller R. dist. Ore: Gold, silver. Ref: 63, p. 38.

Napoleon (30)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Neptune (11)

Loc: Secs. 25 and 26, (26-10E), on Money Cr. Ore: Gold, silver, lead. Ref: 158.

Normandie

(see Bergeson)

Norwood (31)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158,

Oliver (1)

Loc: Secs. 5 and 6, (26-10E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Online (96)

Loc: $NE\frac{1}{4}$ sec. 35, (22-10E), Cedar R. dist. Ore: Gold, copper. Ref: 63, p. 47.

Ophir (91)

Loc: NE $\frac{1}{4}$ sec. 21, (22-10E), Cedar R. dist. Ore: Gold, silver. Ref: 63, p. 48.

Oriole (98)

Loc: NW $\frac{1}{4}$ sec. 13, (21-10E), Cedar R. dist. Ore: Gold. Ref: 63, p. 48.

Owen (32)

Loc: Secs. 31 and 32, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Paradise (33)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Paymaster

Loc: Parallel to San Francisco property, Money Cr. dist. Ore: Gold, silver. Ref: 63, p. 39.

Pedro

(see under copper)

Pythias

(see Damon and Pythias)

Quartz Creek (73)

(see under copper)

Rainy (Western States Copper) (74)

(see also Quartz Creek under copper)

Loc: Sec. 16, (24-10E), Taylor R. dist. Access: Road. Prop: This may be the same property which is described under the name "Quartz Creek" under copper. Owner: M. F. Gilbreath, Seattle, Wash. (1951—), leasing to Western States Copper Corp., Seattle, Wash. (1952—). Ore: Gold, silver, copper. Ore min: Chalcopyrite, brannerite, pyrite, pyrrhotite, molybdenite, arsenopyrite. Gangue: Quartz, tourmaline. Deposit: Quartz diorite breccia with ore minerals irregularly exposed throughout the shaft. Dev: Shaft 106 ft. deep, 3 short adits (1953). Improv: 50-ton flotation mill (1953). Assays: Slight radioactivity in one place. Prod: 1 load of conc. shipped to Tacoma smelter in 1952. 1953-1955. Ref: 108, 2/53, p. 103. 133, p. 41. 157.

Ray (34)

Loc: Sec. 32, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Robinson (May Earhart, Bear Creek) (95)

Loc: Sec. 4, (21-10E), Cedar R. dist. Access: Trail. Prop: 2 patented claims: Robinson, Robinson Extension. Owner: Robinson Mines Co. (1935). Ore: Gold, silver, copper. Dev: 60-ft. shaft, 600-ft. adit. Ref: 58, p. 59. 63, p. 47. 158.

Romeo

Loc: Summit of Cleopatra Basin and extending down both the Snoqualmie and Miller R. sides of ridge. Ore: Gold, silver, copper. Ref: 63, p. 37.

Rushing (42)

Loc: Secs. 8 and 9, (25-10E), on Illinois Cr. Access: Trail and 24 mi. by road to railroad at North Bend. Prop: 6 patented claims: Olympia, Ainsworth, Blakely, Lenark, Bell of Washington, Cameo. Owner: James Campbell, Seattle, Wash. (1935).

Ore: Gold. Deposit: Said to be a vein 8 ft. wide. Dev: 3 adits 300, 400, and 500 ft. long. Assays: As high as \$161 Au reported. Ref: 158.

Salmon Creek (4)

Loc: S½ sec. 10, (26-10E), about 1 mi. S. of Baring. Owner: W. R. Anderson, Baring, Wash. Ore: Gold, silver, lead, zinc. Ref: 158.

San Francisco (12)

Loc: Secs. 25 and 36, (26-10E), Miller R. dist. Ore: Gold, silver, copper. Ref: 63, p. 39. 158.

San Jose (93)

Loc: SE¼ sec. 27, (22-10E), Cedar R. dist. Ore: Gold, copper. Assays: 10 tons shipped in 1894 av. \$12 per ton. Ref: 63, pp. 47-48.

Sara (35)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Sara Williams (36)

Loc: Sec. 31, (26-11E), Money Cr. dist. Prop: 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Seattle (89)

Loc: $SW\frac{1}{4}$ sec. 15, (22-10E), Cedar R. dist. Ore: Gold, silver. Ref: 63, p. 48.

Seattle-Cascade (54)

(see under silver)

Silver Dollar and Copper Plate

(see Seattle-Cascade under silver)

Silver Star (59)

(see under silver)

Sockless Jerry

(see Last Chance)

Solomon (37)

Loc: Sec. 31, (23-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold, silver, lead. Ref: 63, p. 39. 158.

Square Deal

Loc: Snoqualmie area. Owner: A. O. Larsen, Seattle, Wash. (1938). Ore: Gold, copper. Ref: 58, p. 64. 104, 7/30/38.

Stemwinder (92)

Loc: $SE\frac{1}{4}$ sec. 21, (22-10E), Cedar R. dist. Ore: gold, silver. Ref: 63, p. 48.

Stevens

(see Una under copper)

Summit

(see Guye under iron)

Sunday

(see under silver)

Surprise

(see under copper)

Teddy R. (68)

Loc: Sec. 32, (25-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Triple S

(see Seattle-Cascade under silver)

Triune

Loc: Miller R. dist. Ore: Gold, silver, lead. Ref: 63, p. 38.

Twin Lakes

Loc: 8 mi. from mouth of Miller R. Ore: Gold, copper. Ref: 63, p. 38.

Una (55)

(see under copper)

Valley Queen (60)

Loc: Sec. 33, (25-11E), Summit dist. Prop: 1 patented placer claim. Owner: Monte Cristo Mining Co. Ore: Gold. Ref: 158.

Vandalia

Loc: E. Fk. of Money Cr. Ore: Gold, silver. Ref: 63, p. 40.

Ventura (79)

Loc: Secs. 31 and 32, (24-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref. 158.

Victoria

Loc: Cedar R. dist. Ore: Gold, copper. Ref: 63, p. 48.

War Eagle (56)

Loc: Sec. 19, (25-11E), Miller R. dist. Ore: Gold, silver, copper. Ref: 63, p. 38.

Washington

(see Arizona and Washington)

Western States Copper

(see Rainy)

White River (99)

Loc: Approx. sec. 6, (19-8E), on S. side of Quartz Mtn. Ore: Gold. Deposit: Silicified and altered volcanic rocks associated with the alunite deposits. Dev: 2 adits, one 300 ft. long. Improv: About 1890 a stamp mill was erected to mill the ore but was soon abandoned. Assays: Said to range from 54¢ to \$1.40 Au. Ref: 158.

Woodline (97)

Loc: Center sec. 35, (22-10E), Cedar R. dist. Ore: Gold, copper. Ref: 63, p. 47.

J. Taylor Wright (65)

Loc: Sec. 31, (25-11E), Money Cr. dist. Prop. 1 patented claim. Owner: King County. Ore: Gold. Ref: 158.

Yellow Jacket (2)

Loc: Sec. 15, (26-10E), on W. side of E. Fk. of Salmon (Index) Cr. Access: 3½ mi. by road and trail from Baring. Prop: 10 claims. Ore: Gold, silver. Deposit: Vein contains some free-milling and some sulfide ore. Dev: 540 ft. of underground workings. Assays. Av. assay value is about \$16, mostly in gold but some silver. Ref: 88, p. 85.

KITTITAS COUNTY

American Eagle (1)

Loc: On Eagle Mtn. W. of the Aurora property, T. 24 N. R. 14 E., Cle Elum dist. Prop: 1 claim. Owner: E. P. Gassman and Harry Hodges (1892). Ore: Gold, silver. Ore min: Arsenopyrite. Deposit: 6-ft. vein with a 1½-ft. paystreak. Assays: \$30 Au, \$15.30 Ag. Ref: 13, p. 133. 63, p. 62.

Aurora (Lynch, Paramount) (3)

Loc: Secs. 26 and 27, (24-14E), on E. side of Cle Elum R. Access: 24 mi. by road and trail from railroad at Roslyn. Prop: 16 patented claims. Owner: John Lynch, Yakima, Wash., leasing to Paramount Mines, Inc. (1940). Ore: Gold, silver, copper. Ore min: Free gold, arsenopyrite. Deposit: 4-ft. quartz vein. Dev: 2,000-ft. haulage adit and 2 shafts, each more than 200 ft.

deep. Assays: Ore said to assay 1 oz. Au, 14 oz. Ag, 6% Cu, 28% As, probably on a picked sample. Prod: Has produced. Ref: 13, p. 133. 63, pp. 61-62. 111, p. 7. 158.

B&B (34)

Loc: Sec. 34, (21-17E), Swauk dist. Owner: B & B Gold Mines, Inc., Seattle, Wash. (1947). Ore: Gold. Prod: Unknown amount prior to 1947. Ref: 51, p. 4.

Bear Creek Gold

(see under silver)

Beaver (10)

Loc: Secs. 23 and 26, (23-14E), Cle Elum dist. Ore: Gold, silver, copper. Ref: 58, p. 5. 63, p. 64.

Bertha

Loc: On gulch entering Boulder Cr. Ore: Gold. Ref: 63, p. 70.

Big Bear and Little Bear

Loc: Swauk dist. Ore: Gold. Ref: 63, p. 70.

Big Z

(see Zerwekh)

Bloomquist Bros. (32)

Loc: Sec. 22, (21-17E), at mouth of Blue Cr., Swauk dist. Ore: Gold. Ref: 158.

Blue Bonnet (16)

(see under copper)

Bonanza

(see Dolphin under copper)

Boss (2)

Loc: On Eagle Mtn. near American Eagle property, Cle Elum dist. Owner: Col. C. Bell (1892). Ore: Gold, silver. Ore min: Arsenopyrite. Deposit: 6-ft. vein with 18-in. paystreak. An extension of the American Eagle. Assays: \$25 Au, 22 oz. Ag. Ref: 13, p. 134.

Boyles (21)

(see under copper)

Broncho

Loc: On Mammoth Mtn., Cle Elum dist. Owner: James Greeve and Philip Stanton (1892). Ore: Gold. Deposit: 4-ft. vein of free-milling ore carrying sulfides. Dev: 80 ft. of workings. Assays: \$40 Au. Ref: 13, p. 134.

Brown Bear

Loc: On ridge between Cougar and Lyons Gulches, Swauk dist. Owner: F. W. Fowler, Seattle, Wash. Ore: Gold. Ref: 63, p. 69, 158.

Brown Bear

Loc: On Goat Mtn., W. of Cle Elum R. Ore: Gold, silver, lead. Ref: 63, p. 65.

Camp Creek (17)

(see under silver)

Cascade

Loc: On Mt. Hawkins, Cle Elum dist. Ore: Gold, silver, lead. Ref: 63; p. 65.

Cascade Chief (Morrison, First of August, Gladstone) (40)

Loc: SE¼SW¼ sec. 26, (21-17E), 4 mi. up Cougar Gulch from Liberty post office. Elev: 3,400 ft. Access: Road. Prop: 5 lode claims: First of July, First of August, Fourth of July, The Gladstone, Uncle Sam. Also one placer claim: Cougar. Owner: Cascade Chief, Inc. (1934-1936). State of Washington Mining Co. (1915). Ore: Gold. Ore min: Free gold. Deposit: 3 shear

zones in sandstone av. 4 ft. in width and carry stringers of mineralized quartz. **Dev:** Crosscut and some old workings total several hundred ft. of workings. **Assays:** Channel sample across the vein assayed \$7.24 Au. One assay showed \$129.35 Au. **Prod:** 1911, 1938, 1939. **Ref:** 97, 1911, p. 786. **104**, 4/30/34, p. 22; 11/30/36, p. 30. **158**.

Cascade Mining (26)

(see under copper)

Chesapeake

Loc: At head of Boulder Cr., Cle Elum dist. Ore: Gold. Ref: 63, p. 65.

Clarence Jordin (37)

Loc: Sec. 2, (20-17E), on Snowshoe Ridge, Swauk dist. Prop: 3 unpatented claims, including Ace of Diamonds. Owner: W. L. Palmer, Electric City, Wash. (1941). Ore: Gold, silver. Ore min: Free gold. Gangue: Quartz, calcite. Prod: \$35,000 reported. Produced from Ace of Diamonds claim in 1952. Ref: 58, p. 35. 106, 4/21/32, p. 13. 108, 1/53, p. 90. 158.

Cle Elum (11)

(see under silver)

Cougar (41)

Loc: Sec. 36, (21-17E), Swauk dist. Elev: 3,500 ft. Owner: Washington Gold Co., Inc., Tieton, Wash. (1938). State of Washington Mining Co. (1915). Cougar Gulch Mining Co. (1934). Ore: Gold. Ore min: Free gold. Deposit: Quartz vein in a decomposed basaltic dike. Prod: Test shipment in 1938. Ref: 143, p. 80. 144, p. 9. 158.

Denney (18)

(see under chromium)

Dolphin

(see under copper)

Don Tom

Loc: At head of Fortune Cr., Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 63.

Durrwachter

(see Mineral Creek under copper)

Edna R. (12)

Loc: SE¼ sec. 24, (23-14E). Ore: Gold. Ore min: Pyrite, arsenopyrite. Deposit: Mineralized quartz vein in granodiorite near its contact with serpentine. Vein irregular. Ref: 139, p. 14.

Elkhorn

Loc: Swauk dist. Ore: Gold. Prod: 1934. Ref: 97, 1935, p. 353.

Epha

Loc: On Mt. Hawkins, Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 64.

Esther and Louisa (27)

(see under silver)

Ewell (Flag Mountain) (36)

Loc: N½ sec. 1, (20-17E), Liberty area. Owner: Ellery Lamb et al., Seattle, Wash. (1953——). William L. Ewell, Cle Elum, Wash. (1952). Ore: Gold. Improv: 10-ton mill (1953). Ref: 108, 1/53, p. 90. 133, p. 32.

Family

Loc: At head of Fortune Cr., Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 63.

Fanny Edell

Loc: Swauk dist. Owner: Dover Mining Co. (1915), Hellan Mining Syndicate (1905-1908). Prod: 1905. Ref: 97, 1905, p. 336; 1907, p. 474; 1908, p. 579. 116, no. 6, 1907, p. 30.

First of August

(see Cascade Chief)

Flag Mountain

(see Ewell)

Flodine (42)

Loc: Sec. 25, (21-17E) and sec. 30, (21-18E). Prop: 12 unpatented lode claims: Ohio, Cougar, Red Rust Nos. 1 to 3, Gold King, Comet, Venus, Meteor, Jupiter, Mars, North Star; and 2 placer claims: Bull Moose, Morning Star. Owner: True Fissure Gold Mines (1928). Ore: Gold. Ore min: Free gold, pyrite. Gangue: Quartz. Deposit: Fissured zone. Dev: 260-ft. shaft, 288-ft. adit, 140-ft. crosscut with 159-ft. drift. Assays: \$6.00 tc \$17.20 Au. Prod: Several thousand dollars from oxidized zone prior to 1928. Ref: 158.

Gambler's Dream

Loc: Cle Elum dist. Ore: Gold. Ref: 63, p. 64.

Gladstone

(see Cascade Chief)

Gold Bug

Loc: Near head of Fortune Cr., Cle Elum R. area. Ore: Gold. Ref: 63, p. 63.

Gold Hill

Loc: Swauk dist. Ore: Gold. Prod: 1911. Ref: 158.

Gold Leaf

Loc: On E. Fk. of Williams Cr., Swauk dist. Owner: G. W. Seaton (1892). Ore: Gold, silver. Ore min: Free gold, some in perfect octahedral crystals. Gangue: Quartz. Deposit: Vein approx. 6 ft. thick occurs in sandstone and shale. Another occurs in a large diabase dike. Assays: 6 tons av. \$40 Au. Gold is high in silver. Prod: 6 tons of ore. Ref: 13, p. 136. 143, p. 80. 144, p. 9.

Gold Mountain

Loc: Near mouth of Fortune Cr., Cle Elum R. area. Ore: Gold. Ref: 63, p. 63.

Gold Reef

Loc: Swauk area, near Blewett Pass highway. Owner: A. E. Locke, Seattle, Wash. (1941). Ore: Gold, silver. Deposit: Quartz vein in Swauk sedimentary rocks. Ref: 58, p. 26. 108, 1/40, p. 29.

Golden

Loc: Liberty. Ore: Gold. Ref: 141, p. 22.

Golden Eagle

Loc: Swauk dist. Ore: Gold. Prod: 1933, 1937. Ref: 97, 1934, p. 296; 1937.

Golden Fleece (Mercer, T-Bone) (31)

Loc: NE4/SW4/4 sec. 13, (21-17E), Swauk dist. Prop: 3 claims and a 5-acre millsite. Owner: Oren F. Fry, Mukilteo, Wash. (1941). Liberty Mines, Inc. (1934-1935). Ore: Gold, silver. Ore min: Pyrite, free gold. Gangue: Quartz, calcite. Deposit: Mineralized shear zone about 4 in. wide cuts carbonaceous shales. Dev: 100-ft. adit and open cut. Assays: Tr. to 0.34 oz. Au. Prod: \$30,000 reported. Ref: 58, pp. 25, 43. 104, 10/15/35, p. 24; 11/15/35, p. 24. 158.

Golden Stair

(see under silver)

Grandview (23)

(see under copper)

Granite King (25)

(see under silver)

Great Western

Loc: Swauk area. Ore: Gold, silver. Ref: 58, p. 28.

Great Wonder

Loe: Swauk area. Ore: Gold. Prod: Amount not known. Ref: 58, p. 28.

Grizzly Bear

Loc: Cle Elum dist. Owner: Dover Mining Co. (1914). Ore: Gold, silver, copper, lead, antimony. Ref: 105, no. 14, 1914, p. 592.

Hans Wagner

(see under silver)

Huckleberry (9)

(see under copper)

Hurley Creek (Nairn) (30)

Loc: Center N½ sec. 18, (21-18E). Owner: Mr. Nairn Mukilteo, Wash. (1938). Ore: Gold. Ore min: Pyrite. Gangue: Quartz, calcite. Deposit: 2 shear zones in carbonaceous shale and sandstone av. about 4 ft. in width and contain mineralized quartz stringers. Dev: 170-ft. adit, 2 shafts about 40 ft. deep. and some open cuts. Assays: \$4 Au. Ref: 158.

Ida Elmore (19)

Loc: S½ sec. 24 and NE¼ sec. 25, (23-14E), Cle Elum dist. Prop: 2 patented claims: Ida Elmore, Apex. Owner: Meleo S. Pechet, Seattle, Wash. (1949-1952). Ore: Gold, silver. Deposit: Quartz vein about 12 to 18 in. wide in serpentine. Dev: 235 ft of crosscut and about 100 ft. of drift, also some open cuts. Assays: Av. ¾ to 1 oz. Au. Ref: 13, p. 134. 63, p. 64. 146, p. 14. 158.

Iias (22)

(see under copper)

Just In Time

Loc: On Fortune Cr., Cle Elum dist. Ore: Gold, silver. Ref: 63, p. 63.

Keystone (24)

(see under mercury)

King Solomon (7)

(see under copper)

Last Chance

Loc: Cle Elum dist. Owner: Cle Elum River Mining Co., Inc. Seattle, Wash. (1952——). Gallaher Mining & Milling Co (1907-1908). Ore: Gold, silver, copper. Ref: 33, 1907, p. 617 1908, pp. 706-707. 97, 1905, p. 336.

Legal Tender

(see under copper)

Liberty (43)

Loc: NW4/NE4/ sec. 25, (21-17E) and sec. 19, (21-18E), in Lyons Gulch. Access: Road. Prop. 12 claims: Contact No. 1 Orogrande, Orogrande No. 1, Big Boy Nos. 1 and 2, Big Chie Nos. 1 and 2, Golden Eagle, Sunset Nos. 2 and 3; and 2 fractions Owner: A. C. Pellard, Mount Vernon, Wash. (1941). Ore: Gold Ore min: Pyrite. Deposit: Shear zone about 4 ft. wide in carbonaceous shale contains discontinuous mineralized stringer of quartz and calcite. Dev: 1,200-ft adit with a 145-ft. drift and another 200-ft. adit. Improv: 2 log cabins (1952). Assays Test run on 33 tons of ore returned 10 oz. Au, or 0.3 oz. per ton Prod: (1935-1936). Ref: 58, p. 39. 97, 1937, p. 551. 158.

Liberty Lode

(see Mineral Creek under copper)

Little Rear

(see Big Bear and Little Bear)

Little York

Loc: Swauk dist. Ore: Gold, silver. Ore min: Free gold. Deposit: Quartz veins in sheared and silicified sandstone. Assays: Silver content of the gold reportedly amounts to 20%. Ref: 143, p. 80.

Lost

(see Grandview under copper)

Lynch

(see Aurora)

Magpie Canyon (47)

Loc: NE¼ sec. 34, (19-17E). Access: On highway 8½ mi. NW. of Ellensburg. Ore: Gold. Ref: 158.

Majestic

Loc: Cle Elum dist. Owner: Dover Mining Co. (1914). Ore: Gold, silver, copper, lead, antimony. Ref: 105, no. 14, 1914, p. 593.

Mammoth

Loc: On Mammoth Mtn., E. of Eagle Mtn., Cle Elum dist. Owner: James Greeve and Philip Stanton (1892). Ore: Gold, silver, copper. Deposit: 6-ft. vein. Dev: 75-ft. crosscut. Ref: 13, p. 134.

Marv

Loc: On Fortune Cr., Cle Elum R. area. Ore: Gold, silver, copper. Ref: 63, p. 63.

Maud O. (20)

Loc: NW¼ sec. 25, (23-14E), Cle Elum dist. Ore: Gold. Ore min: Pyrite, arsenopyrite. Deposit: Mineralized quartz vein in a zone of crushed greenstone into which serpentine has been intruded. Vein irregular. Prod: 1930. Ref: 58, p. 42. 63, p. 64. 100, 1897, pp. 97, 132, 158. 146, p. 14.

Mayflower

Loc: On Fortune Cr., Cle Elum R. area. Ore: Gold. Ref: 63, p. 63.

Mercer

(see Golden Fleece)

Mildred

(see under copper)

Mineral Creek (28)

(see under copper)

Morning

Loc: Swauk area. Ore: Gold, silver. Ref: 58, p. 46.

Morning Star (13)

(see under copper)

Morris

Loc: Swauk dist. Ore: Gold. Prod: 1935-1937. Ref: 97, 1937, p. 551; 1938, p. 459.

Morrison

(see Cascade Chief)

Mountain Belle

(see under copper)

Mountain Chief

(see under copper)

Mountain Daisy (38)

Loc: Sec. 1, (20-17E) and sec. 6, (20-18E), Swauk dist. Owner: Ollie Jordin, lessor, Rt. 2, Cle Elum, Wash. (1952). Ore: Gold. Prod: 1934-1938. Ref: 97, 1937, p. 551; 1938, p. 459; 1939, p. 490. 133, p. 37.

Mountain Whistler

Loc: At head of Fortune Cr., Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 63.

Nairn

(see Hurley Creek)

Navidad

(see under copper)

Nellie

Loc: Kittitas County. Ore: Gold. Prod: 1940. Ref: 97, 1941, p. 474.

Ollie Jordin (39)

Loc: Sec. 2, (20-17E), ¾ mi. up Williams Cr. from Liberty, Swauk dist. Owner: Ollie Jordin and Miss Ollie Blissett (1938). Ore: Gold. Ore min: Free gold. Deposit: Silicified zone 4 ft. wide in Swauk sandstone contains small quartz-calcite stringers in which "wire" gold occurs. Dev: 170-ft. adit. Assays: Gold occurs in rich pockets, hence assays erratic. Ore av. \$40 per ton on 500 tons mined. Prod: About \$20,000 in gold during 2 years prior to 1934. Ref: 158.

Paramount

(see Aurora)

Queen of the Hills

Loc: Fortune Cr., Cle Elum R. area. Ore: Gold. Ref: 63, p. 63.

Ređ

Loc: Swauk area. Ore: Gold. Ref: 58, p. 57.

Rocky Point (6)

Loc: Sec. 12, (23-14E), Cle Elum dist. **Ore:** Gold. **Ref: 63,** p. 62.

Ruby (8)

Loc: Sec. 20, (23-14E), Cle Elum dist. Ore: Gold, silver. Ref: 63, p. 64.

Ruby King

Loc: On Fortune Cr., Cle Elum R. area. Owner: Dover Mining Co. (1914). Ore: Gold, silver, copper, lead, antimony. Ref: 63, p. 63. 105, 1914, p. 592.

Rushing Water

Loc: Fortune Cr., Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 63.

Silver Bow

(see under copper)

Silver Bull (4)

Loc: Contiguous to Fish Lk. in Stevenson Gulch, Cle Elum dist. Prop: 1 claim. Owner: James Greeve, E. P. Cassman, and August Sassi (1892). Ore: Gold, silver. Ore min: Pyrite. Deposit: 5-ft. vein of white quartz carrying pyrite and free-milling ore. Dev: 4 adits 40, 70, 90, and 130 ft. long. Assays: \$100 Au, Ag. Ref: 13, p. 134.

Silver Creek (5)

Loc: Sec. 12, (23-14E), Fish Lk. area. Access: 24 mi. by road to railroad at Ronald. Owner: Cle Elum River Mining Co., Inc., Seattle, Wash. (1952——). Silver Creek Mining Co., Tacoma, Wash. (1939). Ore: Gold, silver. Deposit: Quartz vein 15 to

20 ft. wide reported, but av. values are too low to mine whole width, although some assays show good values in gold and silver. **Dev:** 5 adits, 1 shaft. **Assays:** A 5-ton shipment gave \$12 per ton. **Prod:** 1937, 1939. **Ref:** 58, p. 52. 97, 1938, p. 459; 1940, p. 478. 158.

Silver Dump (14)

(see under silver)

Silver Queen (15)

(see under silver)

Sonny Brown (44)

Loc: Sec. 30, (21-18E), on Nelson Hill. Elev: 3,800 to 4,600 ft. Access: 4 miles of truck road to main highway. Prop: 5 claims. Owner: E. K. Brown, Ellensburg, Wash., and A. R. Jordin, Liberty, Wash. Ore: Gold, silver. Ore min: Free gold. Deposit: 11 veins, 20 in. to 8 ft. wide. Dev: 300-ft. shaft. Ref: 158.

Standard

Loc: On Fortune Cr., Cle Elum R. area. Ore: Gold, lead. Ref: 63, p. 63.

Sunrise

Loc: Swauk dist. Ore: Gold. Prod: 1929, 1930, 1933, 1934. Ref: 97, 1930, 1931, 1934, 1935.

Sunshine

Loc: Swauk dist. Ore: Gold. Prod: 1940. Ref: 97, 1941, p. 474.

Sylvanite (33)

Loc: NE¼ sec. 15, (21-17E), Swauk dist. Access: 17 mi. by good road from railroad at Cle Elum. Ore: Gold. Ore min: Free gold. Deposit: Hydrothermally altered zone in fractured Swauk sedimentary rocks. Assays: 0.04 oz. Au. Prod: Probably has produced. Ref: 158.

T-Bone

(see Golden Fleece)

Thorp

Loc: On Red Mtn., Cle Elum R. area. Ore: Gold, silver, copper. Ref: 63, p. 65.

Tip Top

Loc: On divide between Fortune Cr. and Teanaway Cr. Ore: Gold, silver, copper. Ref: 63, p. 63.

Tip Top No. 1

Loc: Head of N. Fk. Fortune Cr., Cle Elum R. area. Ore: Gold, silver, copper. Ref: 63, p. 63.

Topping

Loc: Mammoth Mtn., Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 62.

True Fissure Gold (45)

Loc: Sec. 30, (21-18E), Swauk dist. Ore: Gold. Ref: 58, p. 69.

Twin

Loc: On Fortune Cr., Cle Elum R. area. Ore: Gold, silver, copper, lead. Ref: 63, p. 63.

Valinia

Loc: Cle Elum dist. Ore: Gold, silver. Ref: 13, p. 134.

Vidette

Loc: On Mammoth Mtn., Cle Elum R. area. Ore: Gold. Ref: 63, p. 62.

Wall Street (46)

Loc: Sec. 30, (21-18E), 5½ mi. up Cougar Gulch from Liberty. Access: 1½ mi. trail. Prop: 3 unpatented claims. Owner: Wm. Newstrum, Ellensburg, and R. J. Jordin, Liberty, Wash. (1934). Wall Street Mining Co. (1909-1915). Ore: Gold. Gangue: Quartz. Deposit: Silicified fracture zones in sand-

stone. **Dev:** 900-ft. adit connected by a raise with a 306-ft. adit 260 ft. above the lower adit. A 54-ft. winze in the upper adit. **Assays:** \$5.60 to \$10.50 Au. **Prod:** \$50,000 reported prior to 1935. 1938. **Ref:** 58, p. 71. 97, 1939, p. 490. 104, 4/30/34, p. 22. 158.

War Eagle

Loc: On Goat Mtn., Cle Elum R. area. Ore: Gold, silver. Ref: 63, p. 65.

Washington (35)

Loc: Sec. 10, (20-17E), Swauk dist. Owner: Washington Gold Co., Inc., Yakima, Wash. (1941). Ore: Gold. Ref: 58, p. 72.

Whippoorwill

Loc: On Fortune Cr., Cle Elum R. area. Ore: Gold, copper. Ref: 63, p. 63.

Williams

(see Iias under copper)

Zerwekh (Big Z) (29)

Loc: Sec. 8, (21-18E), near head of Swauk Cr. Elev: 3,500 ft. Access: Road. Prop: 1 unpatented claim. Owner: Vernon J. Zerwekh, Chehalis, Wash. (1950). Ore: Gold, silver. Molybdenum, vanadium, and titanium are reported, but their occurrence here is doubtful. Ore min: Pyrite, free gold. Deposit: A 7-ft. vein of chalcedonic quartz in Swauk sediments near a 40-ft. diabase dike. Dev: 207-ft. adit. Improv: Cabin, compressor, drill, ore car (1950). Assays: Av. about \$8.00 Au, Ag. Ref: 69, p. 15. 158.

LEWIS COUNTY

Eagle Peak (1)

(see under copper)

Tacoma (2)

Loc: On S. Fk. Mineral Cr. Owner: Davis & Evans Mining Co. (1897). Ore: Gold. Ref: 63, p. 116.

Waterfall (3)

Loc: On Mineral Cr. Prop. 14 claims. Owner: Davis & Evans Mining Co. (1897). Ore: Gold, silver, lead. Ore min: Galena, limonite. Dev: 30- and 70-ft. shafts, and 4 adits, 20, 40, 100, and 140 ft. long. Ref: 63, p. 116.

LINCOLN COUNTY

Egypt

(see Pitney Butte under molybdenum)

Fouress (1)

(see under zinc)

Iron Crown (2)

Loc: In Mill Canyon, about 9 mi. SE. of Pitney Butte and 10 mi. from Davenport. Prop: 5 claims. Owner: C. G. Snyder, H. A. P. Myers, Dr. J. P. Turney, H. H. McMillan, Charles L. Young, Davenport, Wash. (1897). Ore: Gold, copper. Dev: 30-ft. shaft with 30-ft. crosscut. Ref: 63, p. 116.

Pitney Butte (Fouress)

(see Fouress under zinc)

Pitney Butte

(see under molybdenum)

Spokane Molybdenum

(see Pitney Butte under molybdenum)

United Workman

(see under silver)